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ABSTRACT

A survey was mailed to 169 Kansas students in the 1993 class of National Merit Semifinalists (NMSFs). Data were analyzed in terms of age, gender, race, language, family characteristics, high schools attended, extracurricular activities, leadership positions, part-time work, travel experiences outside the United States, high school programs, judgments concerning public schools, college/university preferences, and career plans. Results indicated that: (1) nearly two out of three of all Kansas NMSFs are males, and almost all are Caucasian Americans; (2) NMSF parents are unusually stable and well educated; (3) 18 percent of the state's high schools produce all of the NMSFs; (4) NMSFs report frequent participation in extracurricular nonsport activities and some participation in extracurricular sports and community-based activities; (5) four out of five NMSFs hold high school leadership positions; (6) more than half hold part-time jobs during the school year; (7) nearly two-thirds have traveled outside of the United States; (8) 70% of students reported taking accelerated or Advanced Placement courses; (9) almost 80 percent assigned their schools a grade of A or B; (10) 38 percent listed Kansas colleges and universities among the three institutions they would like to attend; (11) more than one-third had not made a career choice; and (12) only 20 percent listed Kansas as the state in which they would prefer to spend their careers. Appendixes contain statistical data supporting the study and a copy of the survey questionnaire. (Contains 26 references.) (JDD)

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KANSAS NATIONAL MERIT SEMIFINALISTS

Policy Analysis Paper No. 1

Jones Institute for Educational Excellence

The Teachers College
Emporia State University

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KANSAS NATIONAL MERIT SEMIFINALISTS

THE CLASS OF 1993

A STUDY CONDUCTED BY

W. Scott Westerman, Jr.
Jones Distinguished University Professor

Jones Institute for Educational Excellence
The Teachers College
Emporia State University
Emporia, Kansas

Kansas National Merit Semifinalists
The Class of 1993

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Acknowledgments

This study is both a celebration and an investigation of the 1993 Kansas National Merit Semifinalists. These exceptionally talented students, 169 in number and representing one-half of one percent of all Kansas high school seniors, deserve to be recognized and honored. Their impressive and unusual achievements also invite inquiries about who they have been, who they are, and who they want to become. In addition, their judgments about their school experiences are of special interest to educators, policy makers, and the general public.

Two out of three of this select group (113 of the 169) took time from their busy schedules to answer a thirty-five question survey. Their cooperation was essential to the success of this study.

Dr. Jack Skillett, Dean of The Teachers College at Emporia State University, first suggested this research. His support, along with the encouragement and assistance of colleagues in the Jones Institute for Educational Excellence: Dr. Leo Pauls, Executive Director, Ms. Beth Saiki-Olsen, Director of Publications, Ms. Christy Schreck, Office Manager, and Ms. Dollia Frizell, Graduate Assistant, enabled the project to progress without complications. Dr. Loren Tompkins, professor in the Division of Educational Administration, offered helpful counsel and leadership in developing a computer program to compile the questionnaire data.

Finally, it is important to acknowledge that this study could not have been undertaken without the financial support provided by the Walter S. and Evan C. Jones Trust of Lyon County, Kansas. The Trust's visionary endowment helps to underwrite costs associated with the Jones Institute and the Jones Distinguished University Professorship.

I. Introduction

A. Merit Scholarship Program

There are 169 Kansas students in the 1993 class of National Merit Semifinalists (NMSFs). They have achieved this distinction by performing at an exceptionally high level on the Preliminary Scholastic Aptitude Test/ National Merit Semifinalist Qualifying Test (PSAT/NMSQT) as high school juniors during the fall semester of 1991. This elite group represents about half of one percent of the state's 28,000 graduating seniors.

Approximately 15,000 Semifinalists were designated nationally in the Merit Program, chosen from more than one million test participants. The number of Semifinalists named in each state depends upon the state's percentage of the national total of high school seniors. While the scores of all Semifinalists are extremely high, qualifying scores will vary from state to state. For example, this year state qualifying scores ranged from a low of 180 to a high of 204. The score for Kansas was 195.

To become eligible for a Merit Scholarship, Semifinalists must become Finalists, a goal achieved by some 90 percent of the Semifinalists. The requirements to advance to Finalist status include consistently high academic performance in all grades 9 through 12, a SAT score which confirms the PSAT/NMSQT performance, a strong recommendation from the high school principal, and the submission of a scholarship application which provides detailed biographical, academic, and other information concerning the student.

The National Merit Scholarship Corporation (NMSC) currently offers approximately 6500 Merit Scholarships. In operation since 1955, the NMSC is a privately financed, not-for-profit organization which operates without government funding. The 6500 Merit Scholarships are divided among three types as follows:

1. National Merit $2,000 Scholarships. These national awards are one-time, non-renewable scholarships which are distributed nationally using a representational formula similar to that applied to the Semifinalist selection process. Two thousand of these scholarships are awarded annually.

2. Corporate-sponsored Merit Scholarships. Nearly 400 corporations, company foundations, and other business organizations underwrite some 1300 Merit Scholarships for Finalists who meet criteria established by the sponsors. Most are reserved for children of the employees of the sponsor organizations. Some of the awards are one-time, but most are renewable for the undergraduate years. Scholarship amounts range from $500 to $2,000 or more per year.

3. College-sponsored Merit Scholarships. Some 200 colleges and universities offer more than 3,200 awards, ranging in dollar amounts from $250 to $2,000 per year. Three Kansas institutions offer a total of 58 awards as follows: Kansas State University -14, University of Kansas - 40, and Wichita State University - four. Finalists must plan to attend a sponsoring institution to become eligible. Awards are renewable throughout the undergraduate years.

NMSC Merit Scholarships have grown from approximately 500 in 1955 to more than 6500 in 1993. It is important to note, however, that 6,500 represents less than half (46%) of the 14,000 who qualify as Finalists. Consequently, a majority (54%) of the Finalists do not receive

scholarships from NMSC. Some of these may receive financial assistance from university or college scholarships which have not been reserved specifically for Finalists. Nevertheless, it is likely that a number of Finalists receive no scholarships. (The NMSC has no specific data concerning the Finalists who do not receive NMSC Merit Scholarships.)

A major benefit which all Finalists enjoy is access to highly selective universities, if they can afford to attend them. For example, in 1991, the following five universities enrolled more than 800 Finalists even though none offers College-sponsored Merit Scholarships: Harvard - 229, Stanford - 159, Yale - 144, Princeton - 107, and Massachusetts Institute of Technology - 100. (Note: Some of these students may have received National Merit or Corporate-sponsored Merit Scholarships.)

B. Other Studies of Kansas Semifinalists

There have been two previous studies of Kansas National Merit Semifinalists. The Wichita Eagle-Beacon obtained the names of the 1,926 Kansas high school students who were named National Merit Semifinalists from 1970 through 1980, 1,359 of whom were located by the newspaper. In a series of articles appearing during February of 1986, under the general title of The Kansas Brain Drain, the Eagle-Beacon reported where the Semifinalists went to college (63 % did their undergraduate work in Kansas; but for those who went on for graduate studies, 62 % left Kansas). The series focused specifically on those who left Kansas to pursue their careers (nearly 60%) contrasting their reasons with those who remained in the state. (See Appendix X for additional data from the Wichita Eagle-Beacon study.)

The second study was conducted by Carolyn Rampey, a staff member with the Kansas Legislative Research Department. She sent letters and questionnaires to the 159 Kansas students who were Semifinalists in 1985. She received responses from 102 (64.1%) all but one of whom were planning to go to college the next fall. Only 42% of the students were going to attend Kansas schools, a 22% drop from the average percentage reported by the Wichita Eagle-Beacon for the years 1970 through 1980. A similar study one year later showed an increase to 46%. (See Appendix XI for additional data from the Rampey study.)

C. Study Process

This study was conducted over a seven month period, from late August, 1992 through late March, 1993. It involved five stages which can be briefly described as follows: 1. exploring/ inquiring, 2. designing/defining, 3. implementing/surveying, 4. analyzing/ synthesizing, and 5. writing/reviewing.

Stage one involved a literature search and contacts by telephone and/or letter with persons associated with the College Board, the Educational Testing Service, the National Merit Scholarship Corporation, and the Kansas State Department of Education. Also, an Emporia State University student who is receiving a Merit Scholarship was interviewed during this exploratory process.

Stage two resulted in the questionnaire — Survey of High School Seniors Who Are National Merit Semifinalists, which was approved for distribution by the ESU Institutional Review Board for Treatment of Human Subjects. (See Appendix XII for a copy of the survey.)

Stage three included the mailing of the survey to the 169 Kansas NMSFs, addressed to each at his or her school. The initial mailing was on October 21, 1992. Two follow-up mailings

occurred on November 18 and December 10, the last sent by certified mail. Surveys were completed anonymously except that each return envelope included a number to facilitate follow-up requests to those who had not responded. Also, the enrollment of the school which the student was attending was recorded on each returned survey to permit analyses based on school size.

Stage four involved the compilation of the data with selected disaggregations to allow some gender and size comparisons.

Stage five included the review of the investigator's draft report by other staff members in the Jones Institute for Educational Excellence.

D. Statistical Overview

The following statistical overview describes the data base which underlies this study.

Number of Kansas National Merit Semifinalists

Female	62/169 =	36.7%
Male	107/169 =	63.3%
	169 /169 =	100.0%

Number of Completed Surveys Returned

Female	49/62 =	79.0%
Male	64/107 =	59.8%
	113/169 =	66.9%

Number of Schools Attended by NMSFs

Public	57/69 =	82.6%
Private	12/69 =	17.4%
	69/69 =	100.0%

Number of Schools from which One or More Surveys was Received

Public	51/57 =	89.5%
Private	12/12 =	100.0%
	63/69 =	91.3%

Number of NMSFs Attending:

Public Schools	142/169 =	84.0%
Private Schools	27/169 =	16.0%
	169/169 =	100.0%

Number of Completed Surveys Returned by NMSFs Attending

Public Schools	93/142 =	65.5%
Private Schools	20/27 =	74.1%
	113/169 =	66.9%

NMSF Gender Distribution between Public and Private Schools

	Female	Male	Total
Public	52 (83.9%)	90 (84.1%)	142 (84.0%)
Private	10 (16.1%)	17 (15.9%)	27(16.0%)
	62 (100.0%)	107 (100.0%)	169 (100.0%)

Number of Completed Surveys Returned from Public and Private Schools by Gender

	Female	Male	Total
Public	40/52 (76.9%)	53/90 (58.9%)	93/142 (65.5%)
Private	9/10 (90.0%)	11/17 (64.7%)	20/27 (74.1%)
	49/62 (79.0%)	64/107(59.8%)	113/169 (66.9%)

Section four (IV) of this study, High Schools Attended, draws upon data available from the National Merit Scholarship Corporation concerning all 169 of the NMSFs. Other sections are based upon the 113 responses received.

II. Personal Characteristics

A. Age

Kansas law requires a child to be at least six years of age by September 1 to enter the first grade. This means that the typical high school student will be seventeen years or older as of September 1 of his or her senior year and is likely to graduate at the age of seventeen or eighteen.

As of December, 1992, the average age for female NMSFs was seventeen and six months in contrast to eighteen years for males. For the group as a whole, ages ranged from sixteen years and four months to eighteen years and five months. As of June, 1993, two of the females and two of the males will still be sixteen. Ten females and eleven males will still be seventeen. All others will be eighteen.

While the survey did not ask a question about double promotions, the age data suggest that relatively few of the NMSFs skipped grades. As will be noted in section IX of this report, however, most will have accelerated progress in college by accumulating college credits while in high school.

B. Gender

Sixty-two (36.7%) of the 1993 Kansas NMSFs are female and 107 (63.3%) are male. This differs markedly from the proportion of Kansas females (55.7%) and males (44.3%) who took the PSAT/NMSQT (see Appendix I).

Marianne C. Roderick, Executive Vice President of the National Merit Scholarship Corporation, accounts for this under-representation as follows:

"For many years, the proportion of males to females in the Merit Program Semifinalist pool has been about 60% to 40%; this seems to be the case in Kansas as well, with the proportions in the current (1993) competition being 62% and 38% in your state." (Note: As indicated above, the actual percentages are 63.3 and 36.7.)

"As I am sure you know, the PSAT/NMSQT measures verbal and mathematical reasoning abilities that are developed over many years, and a significant factor affecting test performance is the quality and quantity of long-term academic preparation. Students who take the most difficult course work offered at their high schools are better prepared for the test than students who take easier courses and lighter loads. Available data show that, on the average, men take more and tougher college preparatory class work, particularly in the difficult fields of math and science. For example, a young man is 50% more likely than a young woman to take physics or calculus in high school. We do not know why women, on average, take fewer and less difficult math and science courses, but we believe that the quantity and difficulty level of courses students undertake account for much of the difference between the number of males and females on the Merit Program Semifinalist pool."

Phyllis Rosser, of the National Center for Fair and Open Testing, expresses a different view. She claims that the PSAT/NMSQT and the SAT, which are designed to predict success in college, systematically under predict the abilities of high school girls. She offers as evidence the fact that girls consistently earn higher grades in both high school and college.

Perhaps there is truth in both perspectives. In any case, a revised SAT and PSAT/NMSQT will be available in early 1994 which may be responsive to the critics who believe the tests have been biased against both females and minorities.

C. Race

Survey respondents identified themselves as follows:

Caucasian-Americans	104 (92.0%)
Asian-Americans	7 (6.2%)
Native Americans	2 (1.8%)
	113 (100.%)

According to the U.S. Census, racial distribution for the general population in Kansas is as follows:

White	2,232,000 (88.5%)
Black	143,000 (5.6%)
American Indian, Eskimo,Aleut	22,000 (.9%)
Asian, Pacific Islander	32,000 (1.3%)
Hispanic	94,000 (3.7%)
	2,523,000 (100%)

The serious under-representation (none at all) of Blacks and Hispanics among the survey respondents should be a matter for concern.

D. Language Fluency

In response to the question, "Are you fluent in a language other than English?," fifteen (13.3%) answered "Yes," five females and ten males. The languages they reported are Spanish (7), French (4), and one each of Korean, German, Latin and Signing Exact English.

III. Family Characteristics

A. Biological Parents Living/Deceased

B. Parents' Marital Status

The biological parents of 99.1% of the respondents are both living. Only one is deceased. Moreover, 89.9% (98) of the biological parents are still married to each other, only 10.1% (11) are divorced. (Four students did not respond to this item.)

C. Parents' Occupations

The occupations of the fathers and mothers are summarized within the following groups:

Table # 1
Occupations of Fathers and Mothers

Fathers		Mothers	
Engineering	14	Education	25
Managerial	12	Homemaker	22
Education	10	Health/Medical	16
Financial	10	Secretarial/Clerical	10
Health/Medical	10	Managerial	9
Business/Sales	8	Business Sales	8
Farming	7	Financial	4
Maintenance/ Construction	7	Other	11
Law	6	No Response	8
Military	5		113
Computers	4		
Ministry	3		
Psychology	2		
Research	2		
Other	12		
No Response	1		
	113		

D. Parents' Educational Levels

The following describes the highest levels of education the parents have completed:

Table # 2
Parents' Highest Levels of Education

	Fathers		Mothers	
Less than a High School Diploma	3	(2.7%)	1	(.9%)
High School Graduate	6	(5.3%)	8	(7.1%)
College, But Less than a Degree	10	(8.8%)	17	(15.0%)
Associate (2 year) Degree	3	(2.7%)	9	(7.9%)
Bachelor's Degree	35	(30.9%)	45	(39.8%)
Master's Degree or Higher	45	(39.8%)	29	(25.7%)
Other				
JD	2	(1.8%)		
PhD	4	(3.5%)		
MD	3	(2.7%)	1	(.9%)
EdD			1	(.9%)
EdS			1	(.9%)
RN			1	(.9%)
Optometry	1	(.9%)		
Voc. Tech.	1	(.9%)		
	113	(100%)	113	(100%)

Among the degree patterns within family units are the following:

Table # 3
Degree Patterns within Family Units

One parent with less than a high school diploma	4
One parent with a high school diploma	6
Both parents with high school diplomas	4
One parent with the associate degree	8
Both parents with the associate degree	2
One parent with some college, but less than a four year degree	18
Both parents with some college, but less than a four year degree	3
One parent with the bachelor's degree	10
Both parents with the bachelor's degree	21
One parent with the bachelor's degree, the other with the master's or higher	32
Both parents with the master's degree or higher	17

In seventy (61.9%) of the family units, both parents have received the bachelor's or higher degrees. In fourteen (12.4%) of the family units, one or both of the parents have not gone beyond high school.

In fifty (44.2%) of the families, the father has attained a higher level of education, in twenty-two (19.5%) the mother, and in forty-one (36.3%) both parents have the same level of education.

E. Number/Gender of Siblings and Family Size

F. Birth Order

Fourteen (12.4%) of the respondents have no siblings. Thirty-eight (33.6%) have brothers only, 32 (28.3%) have sisters only, and 29 (25.7%) have both brothers and sisters. For the group as a whole, there are more brothers (108) than sisters (83).

The table which follows shows the family sizes, frequencies, and the birth order of the respondents.

Table # 4
Family Sizes and Birth Order

# of Children	# of Families	Birth order		
		1st	Last	Other
1	14 (12.5%)	14		
2	45 (40.2%)	29	17	
3	39 (34.8%)	20	9	10
4	6 (5.3%)	4		2nd-2
5	2 (1.8%)	2		
6	3 (2.7%)	1		2nd-2
7	1 (0.9%)			6th
10	1 (0.9%)	1		
11	1 (0.9%)		1	
	112 (100%)	70	28	15

Note: Twins both counted as 1st.

As will be noted, 87.5% of the respondents come from families of three or fewer children. Single children (14 for 12.4%) and first-born (56 for 49.5%) constitute 61.9% of the group.

G. Estimated Family Income

Estimated family incomes were reported by 108 of the 113 respondents as follows:

Table # 5
Estimated Family Incomes

Under $10,000	1	(0.9%)
$10,000 - $19,999	5	(4.6%)
$20,000 - $29,999	9	(8.3%)
$30,000 - $39,999	14	(13.0%)
$40,000 - $49,999	14	(13.0%)
$50,000 and over	65	(60.2%)
	108	(100.0%)

IV. High Schools Attended

A. Public/private

There are 357 public high schools in Kansas operated by 304 Unified School Districts. Fifty-seven (16%)of these 357 schools, located within 44 (13.2%) of the 304 districts, enroll 142 (84%) of the 169 Kansas National Merit Semifinalists.

There are also 27 private/parochial high schools in Kansas, 12 (44.4%) of which enroll the remaining 27 (16%) of the 169 NMSFs.

Appendix III lists these 69 different schools and the numbers of NMSFs enrolled in each.

B. Size

The following tables describe the distribution of Kansas high school students according to high school size and indicate within which size groups the 69 schools fall, along with the numbers of NMSFs. (See Appendix IV for the specific enrollments of each of the schools.)

Table # 6
Kansas Public High School Enrollments
Including Those with NMSFs and Numbers of NMSFs

Size Groups	# of Students	# of Schools	# with NMSFs	# of NMSFs
0-50	1,128	30	2	2
51-100	5,454	73	2	2
101-150	6,669	53	5	6
151-200	9,550	56	2	2
	22,801 (19.6%)	212 (59.4%)	11 (19.3%)	12 (8.5%)
201-250	6,454	29	3	4
251-300	3,320	12	1	1
301-350	6,597	20	2	2
351-400	4,546	12	2	3
	20,917 (17.9%)	73 (20.5%)	8 (14.0%)	10 (7.0%)
401-450	2,931	7	0	0
451-500	1,478	3	1	1
501-550	2,661	5	2	3
551-600	3,476	6	1	1
	10,546 (9.0%)	21 (5.9%)	4 (7.0%)	5 (3.5%)
601-650	630	1	0	0
651-700	3,391	5	3	6
701-750	1,440	2	1	1
751-800	1,545	2	0	0
	7,006 (6.0%)	10 (2.8%)	4 (7.0%)	7 (4.9%)

801-850	0	0	0	0
851-900	1,763	2	1	1
901-950	4,667	5	3	13
951-1000	2,931	3	3	5
	9,631 (8.2%)	10 (2.8%)	7 (12.3%)	19(13.4%)
1001-1050	2,046	2	1	1
1051-1100	1,069	1	1	3
1101-1150	1,107	1	0	0
1151-1200	1,153	1	1	3
	5,375 (4.6%)	5 (1.4%)	3 (5.3%)	7 (4.9%)
1201-1250	3,686	3	3	7
1251-1300	2,545	2	1	2
1301-1350	2,615	2	1	3
1351-1400	0	0	0	0
	8,846 (7.6%)	7 (1.9%)	5 (8.8%)	12 (8.5%)
1401-1450	0	0	0	0
1451-1500	1,470	1	1	1
1501-1550	4,582	3	2	6
1551-1600	3,153	2	2	6
	9,205 (7.9%)	6 (1.7%)	5 (8.8%)	13 (9.1%)
1601-1650	3,263	2	2	15
1651-1700	6,749	4	3	14
1701-1750	3,444	2	0	0
1751-1800	0	0	0	0
	13,456 (11.5%)	8 (2.2%)	5 (8.8%)	29 (20.4%)
1800-1851	9,087 (7.8%)	5 (1.4%)	5 (8.8%)	28 (19.7%)
	116,600(100.1%)	357 (100%)	57 (100.1%)	142 (99.9%)

Table # 7
Kansas Private/Parochial High School Enrollments
Including those with NMSFs and Numbers of NMSFs

Size Groups	# of Students	# of Schools	# with NMSFs	# of NMSFs
0-50	178	6	4	4
51-100	210	3	0	0
101-150	871	7	0	0
151-200	562	3	2	5
	1821 (29.9%)	19 (70.4%)	6 (50.0%)	9 (33.3%)
210-250	238	1	0	0
251-300	269	1	1	2
301-350	0	0	0	0
351-400	0	0	0	0
	507 (8.3%)	2 (7.4%)	1 (8.3%)	2 (7.4%)

401-450	420	1	1	3
451-500	471	1	1	2
501-550	0	0	0	0
551-600	584	1	0	0
	1,475 (24.2%)	3 (11.1%)	2 (16.7%)	5 (18.5%)
601-650	649	1	1	6
651-700	695	1	1	3
	1,344 (22.1%)	2 (7.4%)	2 (16.7%)	9 (33.3%)
901-950	942	1 (3.7%)	1 (8.3%)	2 (7.4%)
	6,089 (100%)	27 (100%)	12 (100%)	27 (99.9%)

As Table #6 indicates, 79.9% (285) of the public high schools in Kansas enroll no more than 400 students each. These schools are attended by 37.5% (43,718) of the public high school students. Fifteen and a half percent (22) of the NMSFs are in these high schools, representing a ratio of .005 NMSFs per one thousand students.

In sharp contrast are the 3.6% (13) of the schools with student populations of 1600 or more, attended by 19.3% (22,543) of the students, but producing 40.1% (57) of the NMSFs, for a ratio of .025. (Note: For a detailed analysis of ratios of NMSFs to 11th grade students by county, see Appendix V.)

Why is it that these large schools produce five times more NMSFs per thousand students than do the small schools? What factors account for this dramatic difference? It is not the purpose of this study to provide an answer to these questions. However, it is appropriate at this point to list some of the elements which may affect directly or indirectly student achievement.

1. General rigor of the program of study.
2. Opportunities for accelerated or Advanced Placement courses.
3. Rewards or recognition for academic achievement.
4. Quality of the teaching.
5. Quality of facilities and equipment.
6. Expenditures per student.
7. Parents' educational achievements.
8. Parents' educational expectations for their children.
9. Family stability.
10. Educational level of all adults in the community.
11. Community's cultural environment.
12. Community per capita income.

Most important are the personal qualities which the individual student brings to educational opportunities: discipline, intelligence, curiosity, honesty, emotional health, physical health, and drive to succeed — characteristics which are probably essential to becoming National Merit Semifinalists no matter what the nature of the community, family, or school. Admittedly there is an interrelationship between these qualities and the total environment which a student experiences; however, the size of the school is probably not a dominant influence on the development of these personal characteristics.

Exploring further the differences between the ratio of NMSFs in small versus large high schools, the following information is provided.

In Kansas in 1990-91, per pupil costs in the 304 school districts ranged from a low of $3,145 in Pittsburgh (USD 250, K-12 enrollment 2,987) to a high of $10,549 in Mullinville (USD 424, K-12 enrollment 100).

Among the 44 districts with NMSFs, Emporia (USD 253, K-12 enrollment of 4,920) has the lowest per pupil cost at $3,158, while West Solomon Valley (USD 213, K-12 enrollment of 110) is highest at $7,848. The average for the 19 districts with the 19 high schools enrolling 400 or fewer students is $4,944. For the five districts with the 10 high schools enrolling more than 1600, the average is $4,451. (See Appendix VII.) If, however, instructional costs are separated from total costs, the expenditures per classroom are $35,035 in the 19 small districts as compared to $37, 354 in the five large districts. (See Appendix VIII.)

The costs per students in all districts which include NMSFs are summarized in the following table:

Table # 8
Per Student Costs in Districts Enrolling NMSFs

Costs	# of NMSFs	
$3000-3500	34	(23.9%)
3501-4000	49	(34.5%)
4001-4500	41	(28.5%)
4501-5000	11	(7.8%)
5001-5500	4	(2.8%)
5501-6000	0	
6001-6500	1	(.7%)
6501-7000	1	(.7%)
7001-7500	0	
7501-8000	1	(.7%)
	142	(100.0%)

The preceding data indicate that there is no definitive relationship between total expenditures per student and numbers of NMSFs. Additional analysis is required before a judgment can be made concerning the relationship between instructional costs and numbers of NMSFs.

A look at the location of the high schools provides an opportunity to examine possible relationships between per capita incomes and educational levels of resident adults and the number of NMSFs.

C. Location

Thirty (28.6%) of the 105 counties have school districts which include NMSFs. (See Appendix V.) In seven of these counties, contributing 78 of the 142 public school NMSFs, the per capita personal income is above the state average of $16,526. In the other 23 counties, contributing 64 of the NMSFs, per capita income is below the state average.

Five counties account for 66.2 % (94) of all of the public school NMSFs. The following table provides data concerning them.

Table # 9
Profile of the Five Counties
Producing the Most Public School NMSFs

County	Per Capita Income	Total Persons 25 years & Over	# of Bachelors Degree or Higher	# of 11th Grade Students	# of NMSFs & Ratios
Douglas	$13,886	42,308	16,246 (38.4%)	735	12 (1.632)
Johnson	$23,346	230,732	93,446 (40.5%)	3,862	40 (1.035)
Riley	$13,583	30,565	10,484 (34.3%)	531	10 (1.883)
Sedgwick	$17,727	252,868	56,137 (22.2%)	4,195	23 (.548)
Shawnee	$17,886	104,795	23,369 (22.35)	1,720	9 (.523)
		661,268	199,682 (30.2%)	11,043	94 (.851)
Kansas	$16,526	1,565,936	330,412 (21.2%)	27,996	142 (.507)

Using as a standard the ratio of the NMSFs to the number of 11th grade students in each of the above counties, Douglas, Johnson, and Riley are clearly the most impressive. In Douglas County, one of the three school districts, Lawrence (USD 497), includes all 12 of the NMSFs. In Johnson County, four of the six school districts contribute the total of 40 NMSFs as follows: Southeast Johnson County (Blue Valley USD 229) - 5, Spring Hill (USD 230) - 1, Olathe (USD 233) - 4, and Shawnee Mission Public Schools (USD 512) - 30. In Riley County, all three districts enroll NMSFs as follows: Riley County (USD 378) - 1, Manhattan (USD 383) - 8, and Blue Valley (USD 384) - 1.

In Sedgwick County, two of the ten districts, Wichita (USD 259) and Maize (USD 266), enroll 22 and one NMSF respectively. Three out of five of Shawnee County's districts contribute NMSFs as follows: Auburn Washburn (USD 437) - 1, Shawnee Heights (USD 450) - 2, and Topeka Public Schools (USD 501) - 6.

In Douglas, Johnson, and Riley counties the percentage of adults over the age of 25 who have a bachelor's degree or higher far exceeds the state's average. Per capita income varies markedly. The five counties' 26 high schools which supply NMSFs range in size from 71 to 1829; however, larger schools dominate, as Table #10 indicates.

Table #10
Public High Schools in the Five Counties
Producing the Most NMSFs

County/High School	Enrollment	NMSFs
Douglas County		
Lawrence High School	1804	12
Johnson County		
Blue Valley High School	1517	2
Blue Valley North	982	3
Spring Hill High School	391	1
Olathe South High School	1224	3

Olathe North High School	1562	4
Shawnee Mission North H. S.	1591	5
Shawnee Mission Northeast H. S.	1689	5
Shawnee Mission East H. S.	1645	14
Shawnee Mission South H. S.	1822	4
Shawnee Mission West H. S.	1819	2
		40
Riley County		
Riley County High School	153	1
Manhattan High School	913	8
Blue Valley High School	71	1
		10
Sedgwick County		
Maize High School	704	1
Wichita High School Heights	1291	2
Wichita High School West	1470	1
Wichita High School Northwest	1545	4
Wichita High School North	1618	1
Wichita High School Southeast	1699	7
Wichita High School East	1829	7
		23
Shawnee County		
Auburn Washburn High School	1030	1
Shawnee Heights High School	549	2
Highland Park High School	953	1
Topeka West High School	1217	2
Topeka High School	1813	3
		9

A review of Appendix VI reveals that four or more NMSFs come from only those counties which exceed the state's average of 21.1% adults over 25 with bachelor's or higher degrees. The one exception is Wyandotte County (with 10.3%) where Kansas City enrolls five NMSFs. No similar correlation is found, however, for those counties producing from one to three NMSFs.

V. Extra-Curricular Activities

A. High School

1. Non-Sports

NMSFs report frequent participation in extra-curricular non-sport activities in high school, an average of 4.52 activities per person. Females are more involved (4.75) than are males (4.03).

The following tables detail these data:

Table # 11
Participation in Extra-Curricular Non-Sports Activities

Activity	Female	Male	Total
Honor Society(ies)	36 (73.5%)	51 (79.7%)	87 (76.9%)
Student Clubs	40 (81.6%)	47 (73.4%)	87 (76.9%)
Service Organizations	27 (55.1%)	23 (35.9%)	50 (44.2%)
Student Government	19 (38.8%)	28 (43.8%)	47 (41.6%)
Theater/Plays	20 (40.8%)	25 (39.1%)	45 (39.8%)
Band	15 (30.6%)	24 (37.5%)	39 (34.5%)
Forensics	17 (34.7%)	19 (29.7%)	36 (31.8%)
School Paper	14 (28.6%)	13 (20.3%)	27 (23.9%)
Choral Group	12 (24.5%)	14 (21.9%)	26 (23.0%)
Debate	11 (22.4%)	14 (21.9%)	25 (22.1%)
Yearbook	12 (24.5%)	7 (10.9%)	19 (16.8%)
Orchestra	9 (18.4%)	9 (14.1%)	18 (15.9%)
Other			
Scholars' Bowl		4 (6.2%)	4 (3.5%)
Literary Magazine	1 (2.0%)		1 (.8%)

Table # 12
Frequency in Number of Extra-Curricular Non-Sports Activities in Which Individuals Participated

Frequency	Female	Male	Total
None	0	2 (3.1%)	2 (1.8%)
1	1 (2.0%)	0	1 (.9%)
2	8 (16.3%)	8 (12.5%)	16 (14.2%)
3	3 (6.1%)	13 (20.3%)	16 (14.2%)
4	7 (14.3%)	14 (21.9%)	21 (18.6%)
5	13 (26.5%)	8 (12.5%)	21 (18.6%)
6	8 (16.3%)	8 (12.5%)	16 (14.2%)
7	5 (10.2%)	8 (12.5%)	13 (11.5%)
8	1 (2.0%)	2 (3.1%)	3 (2.6%)
9	3 (6.1%)	1 (1.6%)	4 (3.5%)
	49 (99.8%)	64 (100.0%)	113 (100.1%)

2. Sports

Participation in extra-curricular sports activities by NMSFs averages 1.22 per person, with males more active (1.47) than females (0.90). For varsity sports the averages are 1.00 for males and .67 for females, and for intramurals .47 for males and .22 for females.

As will be noted below, the favorite varsity sports for females are basketball, cross country, tennis, and volleyball. For males they are track, football, and basketball.

Table # 13
Participation in Extra-Curricular Sports Activities
(I=Intramural V=Varsity)

Activity	Female			Male			Total		
	I	V	Total	I	V	Total	I	V	Total
Basketball	1	6	7	11	8	19	12	14	26
Tennis	3	5	8	4	5	9	7	10	17
Track	1	3	4		12	12	1	15	16
Volleyball	1	5	6	7	1	8	8	6	14
Football				1	12	13	1	12	13
Cross Country		5	5		6	6		11	11
Swimming 2	4	6	2	3	5	4	7	11	
Soccer		1	1	1	6	7	1	7	8
Golf	1		1	3	1	4	4	2	5
Wrestling				5	5		5	5	
Baseball					4	4		4	4
Cheerleading/Pompon		2	2		1	1		3	3
Bowling				1		1	1		1
Fencing		1	1					1	1
Gymnastics 1		1				1	1		
Softball	1		1				1		1
Synchronized Swimming		1	1					1	1
	11	33	44	30	64	94	41	97	138

Table # 14
Frequency in Number of Extra-Curricular Sports Activities in Which Individuals Participated

Frequency	Female	Male	Total
None	20 (40.8%)	20 (31.3%)	40 (35.4%)
1	17 (34.7%)	16 (29.7%)	33 (29.2%)
2	10 (20.4%)	14 (21.9%)	24 (21.2%)
3	1 (2.0%)	9 (14.1%)	10 (8.9%)
4	1 (2.0%)	3 (4.7%)	4 (3.5%)
5		1 (1.5%)	1 (.9%)
6		1 (1.5%)	1 (.9%)
	49 (99.9%)	64 (100.0%)	113 (100.0%)

B. Community

Most NMSFs (87.6%) participate in community-based activities, averaging 1.38 activities per person. Males (1.39) are slightly more active than females (1.37). The following tables detail the frequency and nature of the students' involvement.

Table # 15
Participation in Community-Based Extra-Curricular Activities

Activity	Female	Male	Total
Religious Organizations	28 (41.8%)	35 (39.3%)	63 (40.4%)
Sports Programs	11 (16.4%)	16 (17.9%)	27 (17.3%)
Scouts	1 (1.5%)	18 (20.2%)	19 (12.2%)
4 H	8 (11.9%)		8 (5.1%)
Candy Stripers	4 (5.9%)	1 (1.1%)	5 (3.2%)
Other	15 (22.4%)	19 (21.3%)	34 (21.8%)
	67 (99.9%)	89 (99.8%)	156 (100.0%)

The "Other" category includes such activities as volunteers for the Red Cross, a Cerebral Palsy Camp, a soup kitchen, a day care center, a botanical center, a guidance center, a public library, a Taiwanese organization, and roles in a community band/orchestra, youth symphony, theaters, a ballet company, a dance company, choral groups, etc.

Table # 16
Frequency in Number of Community-Based Extra-Curricular Activities in Which Individuals Participated

Frequency	Female	Male	Total
None	6 (12.2%)	8 (12.5%)	14 (12.4%)
1	22 (44.9%)	26 (40.6%)	48 (42.5%)
2	17 (34.7%)	21 (32.8%)	38 (33.6%)
3	4 (34.7%)	7 (10.9%)	11 (9.7%)
4		1 (1.6%)	1 (.9%)
5		1 (1.6%)	1 (.9%)
	49 (100.0%)	64 (100.0%)	113 (100.0%)

VI. Leadership Positions

Female respondents tend to hold more leadership positions in high school (2.14 positions) than do males (1.83 positions) At the same time, a higher percentage of females (20.4%) than males (17.2%) report no leadership roles.

NMSFs provide leadership within a great variety of activities and organizations. The major organizations and their roles within them are reported as follows:

Table # 17
Types of Leadership Roles in High Schools

	Females	Males	Totals
Student Council			
Pres.	3	2	5
V. Pres.	1	4	5
Sec./Treas.	1	4	5
Exec. Bd.		1	1
Parliamentarian		1	1
Representative	6	4	10
	11	16	26
Class Officers			
Pres.	1	2	3
V. Pres.	1	2	3
Sec./Treas.	2	4	6
	4	8	12
National Honor Society			
Pres.	3	5	8
V. Pres.	1	3	4
Sec./Treas.	1	3	4
Committee Chair	1	—	1
	6	11	17
Scholars/Quiz Bowl			
Captain	4	8	12
Treas.	—	1	1
	4	9	13
Academic (Subject Matter) Clubs			
Pres.	3	7	10
V. Pres.		3	3
Sec./Treas.	5	1	6
	8	11	19
Musical Organizations			
Pres.	1	2	3
V. Pres.		1	1
Sec. Leader	1	6	7
Drum Major	2	1	3
Master (Mistress)	1	—	1
	5	10	15
National Forensics League			
Pres.		5	5
V. Pres.		1	1
Sec./Treas.		3	3
		9	9

	Females	Males	Totals
Debate/Forensics			
Pres.	1	1	2
Captain	—	2	2
	1	3	4
Publications			
Editor	14	11	25
Class Editor	1		1
Photo Editor	1		1
Bus. Manager	1	—	1
	17	11	28
Athletics			
Team Captain	4	4	8
Cheerleading Cap't.	1	1	2
Front Runner	—	1	1
	5	6	11

Table # 18
Frequency in Number of Leadership Positions in High Schools in Which Individuals Participated

#of Leadership Positions	Female	Male	Total
0	10 (20.4%)	11 (17.2%)	21 (18.6%)
1	11 (22.4%)	19 (29.7%)	30 (26.5%)
2	11 (22.4%)	15 (23.4%)	26 (23.3%)
3	7 (14.3%)	11 (17.2%)	18 (15.9%)
4	5 (10.2%)	6 (9.4%)	11 (9.7%)
5	2 (4.1%)	1 (1.6%)	3 (2.7%)
6		1 (1.6%)	1 (.9%)
7	3 (6.1%)		3 (2.7%)
	49 (99.9%)	64 (100.1%)	113 (100%)

VII. Part-Time Work

A. During the School Year

More than half (57.5%) of all NMSFs report part-time jobs during the school year, the percentage is slightly higher for females (59.2%) than for males (56.3%). During the junior year, females averaged 10 hours of work per week. Males averaged 13.4. During the senior year, average work hours increased for females to 11.3 and remained the same for males at 13.4.

B. During the Summer

The percentage employed during the summer increased to 65.6% from the 57.5% for the

school year, with a greater increase for the males (from 56.3% to 68.7%) than for females (from 59.2% to 61.2%).

Employment both during the school year and the summer included a wide range of activities. Among the variety of positions reported are cashiers, cooks, sales clerks, secretaries, receptionists, life guards, umpires, newspaper carriers, custodians, bank tellers, nurses aides, farm hands, baby sitters, yard workers, house cleaners, waitpersons, swimming instructors, etc. Jobs are found most frequently within the fast food industry and grocery stores. Employment in manual labor assignments increased in number during the summer, especially for males.

Relatively few of the jobs are academic in nature, although eight persons reported roles as tutors and laboratory or research assistants. One person earns money writing a newspaper column. Two are paid as musicians, one a violinist who plays in a string trio and the other a church organist who also teaches piano.

VIII. Travel Experiences Outside the United States

Seventy-one (62.8%) of the respondents have traveled outside the United States. Of these, 39.4% have limited their travels to Mexico and/or Canada, 43.7% to one or more European countries, and 16.9% to a combination of countries, including those in South America and Asia.

Slightly more males (64.1%) than females (61.2%) have been outside the United States; however, more of the traveling females (90%) than males (53.7%) have gone beyond Mexico and Canada.

IX. High School Programs

A. Accelerated/ Advanced Placement Programs

This section provides data gathered in response to the following questions:

Does your high school offer accelerated or advanced placement courses? Yes / No
If "Yes," how many?
If "Yes," list those you will have taken by the time you graduate.

A word of caution needs to be introduced in interpreting the data which follow. While Advanced Placement courses represent a specific and copyrighted pattern of instruction, accelerated courses are less well defined and may take many forms. For example, some students may list the International Baccalaureate program within this category. Others may describe regular courses which become "honors" if students do additional assignments. In other words, the term "accelerated" is probably subject to a variety of interpretations by students resulting in some inconsistencies in the responses.

In any case, 89 (78.8%) of the respondents indicate that accelerated or Advanced Placement courses are available in their schools. Twenty-three (20.4%) report that no such courses are offered. One student (.9%) did not answer this question.

In those schools that do offer these courses, the number reported to be taken by students

ranges from one course to over 50. Table #19 provides these data.

It is apparent that school size affects whether or not accelerated or Advanced Placement courses are offered and how many. For example, of the 23 students reporting no such courses, 17 attend schools enrolling fewer than 400 students. (See Table #19-A.) Of the 21 students reporting that their schools offer 10 or more such courses, 17 attend schools enrolling 1500 or more. (See Table # 19-B.)

Table # 19
Number of Accelerated/Advanced Placement Courses Offered in High Schools Attended by NMSFs

Courses in Schools	Students Reporting
None	23
1	2
2	8
3	2
4	2
5	2
6	4
7	6
8	6
9	1
10	4
11	1
12	2
14	1
15	3
16	1
17	3
18	1
12-15	1
20	3
35	1
40	1
50+	1
"A Lot/Many"	4
Uncertain how many	29
No Response	1
	113

Table #19-A
Size of High Schools Not Offering Accelerated or Advanced Placement Courses

School Size	Students Reporting
0-50	3
51-100	2

101-150	4
151-200	2
201-250	4
251-300	1
351-400	1
401-500	1
501-600	1
601-700	2
901-1000	1
	23

Table#19-B
Size of High Schools Offering 10 or More Accelerated or Advanced Placement Courses

School Size	Students Reporting
900-1000	3
1300-1400	1
1500-1600	3
1600-1700	11
1800-1850	4
Other:	
471*	1
	23

(* Honors courses only.)

Of the 89 students reporting that their schools offer accelerated or Advanced Placement courses, nine indicate that they did not take any of these courses. Twenty report enrolling in ten or more. Females average seven courses while men average five. The following table summarizes these data:

Table #20
Number of Accelerated or Advanced Placement Courses Taken

Courses	Female	Male	Total
0	2	7	9
1	3	1	4
2	4	9	13
3	2	3	5
4	4	6	10
5	3	9	12
6	1	4	5
7	2	1	3
8	1	3	4
9	3	2	5
10	3	1	4
11	2	2	4
12	2	0	2

13		1	1
14	1	2	3
15	1	1	2
16	1	0	1
17	1	0	1
18	1	0	1
	37	52	89

B. College Credit

Students were asked: "Does your high school provide opportunities to take college courses taught by college or university instructors ?"

Forty-eight (42.5%) responded affirmatively to this question. Sixty-one (54.0%) answered negatively. Four (3.5%) did not answer the question.

Of the 48 who responded affirmatively, 34 indicated that they have taken such classes (18 out of 49 females for 36.7% , and 16 out of 64 males for 25%).

Students were also asked if they will have earned college credit by the time they graduate from high school and, if so, how many semester hours. Eighty-two (72.6%) reported college credits ranging from one to 74 semester hours. Thirty -four of the 49 responding females (69.4%) and 48 of the 64 males (75%) will have acquired college credit while in high school. (See Table #21) It is important to remember that these totals represent Advanced Placement courses as well as college courses taught by college or university instructors.

Table #21
College Credits Earned
While in High School

Credits	Female	Male	Total
1-2	1	5	6
3	7	5	12
3-5		1	1
3-6		1	1
4	1	1	2
5		1	1
5-10		1	1
6	4	5	9
7		1	1
8	2		2
9	2	1	3
10		4	4
10-15		1	1
11		2	2
13		2	2
14	1		1
15	1		1
15-20	1		1
17		1	1
18		1	1

19	1	1	2
20		2	2
20+		1	1
24	1		1
25	1	1	2
25-30		1	1
27		1	1
29	1		1
30		1	1
36		1	1
40		2	2
40-42	1		1
42	1		1
55		1	1
64	1		1
AP Results	4	2	6
2-year Degree		1	1
Uncertain	3	2	5
No Response		2	2
	34	52	86

C. Foreign Languages Studied

The questionnaire asked students whether or not they had studied a foreign language while in high school. All 113 respondents said that they had. Eighteen reported having studied two languages. The languages chosen are as follows:

Table # 22
Foreign Languages Studied

	Female	Male	Total
Spanish	20	32	52
French	13	6	19
German	7	14	21
Latin	0	2	2
Russian	0	1	1
Spanish/Latin	2	3	5
Spanish/German	1	1	2
Spanish/Russian	1	1	2
French/German	2	2	4
French/Latin	1	0	1
French/Spanish	1	0	1
German/Hebrew	0	1	1
German/Latin	0	1	1
Russian/Japanese	1	0	1
	49	64	113

More than one-third of the students (36.2%) have studied a foreign language for four or more years, 25.9% for three years, 20.4% for two years and 17.3% for one year.

D. Grade Point Averages

The 113 respondents reported grade point averages ranging from a low of 3.33 to a high of 4.80. The overall average for all 49 of the females is 4.116. For the 64 males it is 3.974. Only 14 students reported GPAs of less than 3.75, and only three, less than 3.5.

It should be noted that many high schools use a weighted grading formula which assigns a 5.0 to an "A" achieved in Advanced Placement or accelerated courses. Therefore, all of the GPAs which were reported do not reflect the same grading scale.

X. Judgments Concerning Public Schools

A. Grades Given Public Schools

The following survey question solicited judgments concerning the public schools NMSFs had attended:

> Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. Suppose the public schools themselves, in your community, were graded in the same way. What grade would you give the public schools you have attended?

In the Table which follows, responses are reported separately for public and private school NMSFs. (It is assumed that the 10 private school respondents who chose to answer the question were previously enrolled in public schools.)

Table #23
Grades Given Public Schools by NMSFs

Grade	Public	Private	Total
A	27 (29.0%)	2 (20%)	29 (28.2%)
B	50 (53.8%)	2 (20%)	52 (50.5%)
C	12 (12.9%)	2 (20%)	14 (13.6%)
D	3 (3.2%)	2 (20%)	5 (4.8%)
F	1 (1.1%)	2 (20%)	3 (2.9%)
NR	_____	10	10
	93 (100%)	10 (100%)	103 (100%)

The above question was borrowed with minor revisions from the 1992 Annual Gallup/Phi Delta Kappa Poll which was asked of adults. The question is also asked in Kate VII: Kansans' Attitudes Toward Education, a report conducted biennially by The Teachers College at Emporia State University. That question and the responses to it are as follows:

> Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. Suppose the public schools themselves, in your community, were graded the same way. What grade would you give the public schools here?

Table #24
Grades Given Public Schools by Adults

Gallup		Kate VII	
Grade	%	Grade	%
A	9	A	20
B	31	B	43
C	33	C	22
D	12	D	4
F	5	F	1
?	10	?	10
	100%		100%

It is clear that the great majority of NMSFs like the public schools which they have attended. More than three-fourths (78.7%) rate them "A" (28.2%) or "B" (50.5%), in contrast to the 40% of adults in the Gallup study who rate their communities' schools "A" (9%) or "B" (31%), and the 63% of adults in the Kate VII study who rate their communities' schools "A" (20%) or "B" (43%).

A similar survey question was asked about teachers:

> Using the A, B, C, D, Fail scale again, what grade would you give the public school teachers you have had? (The Gallup/Phi Delta Kappa Poll did not ask this question.)

As will be noted below, these ratings are even higher with over 86% of the NMSFs judging their teachers to be at the "A" (35.9%) or "B" (50.5%) levels.

Table #25
Grades Given Public School Teachers by NMSFs

Grade	Public	Private	Total
A	34 (36.5%)	3 (30%)	37 (35.9%)
B	50 (53.8%)	2 (20%)	52 (50.5%)
C	8 (8.6%)	3 (30%)	11 (10.7%)
D		1 (10%)	1 (1.0%)
F	1 (1.1%)	1 (10%)	2 (1.9%)
NR		10	10
	93 (100%)	10 (100%)	103 (100%)

B. Academic Rigor

While more than three-quarters (78.7%) of the respondents look favorably on their public schools and on their teachers (86.4%), only slightly more than half (53.1%) are satisfied with the level of rigor which they experienced in their academic programs. At the junior high/middle school level, 56.6% recommend more rigorous programs. Table #26 details these data and describes gender differences in the responses.

The survey question which prompted the answers is as follows:

> As you reflect on your school experience, how would you judge the academic rigor of your program?

Table # 26
Judgments of Academic Rigor

	Female	Male	Total
Elementary			
Should be more rigorous	23 (46.9%)	25 (30.0%)	48 (42.5%)
Should be less rigorous		1 (1.6%)	1 (.9%)
Acceptable as it is	26 (53.1%)	38 (59.4%)	64 (56.8%
	49 (100%)	64 (100%)	113 (100%)
Junior High /Middle			
Should be more rigorous	25 (51.0%)	39 (60.9%)	64 (56.6%)
Should be less rigorous		1 (1.6%)	1 (.9%)
Acceptable as it is	23 (46.9%)	24 (37.5%)	47 (41.6%)
No response	1 (2.0%)		1 (.9%)
	49 (99.9%)	64 (100%)	113 (100%)
High School			
English Humanities			
Should be more rigorous	12 (24.5%)	22 (34.4%)	34 (30.1%)
Should be less rigorous		4 (6.3%)	4 (3.5%)
Acceptable as it is	37 (75.5%)	37 (57.8%)	74 (65.5%)
Uncertain		1 (1.6%)	1 (.9%)
	49 (100%)	64 (100.1%)	113 (100%)
Mathematics			
Should be more rigorous	15 (30.6%)	27 (42.2%)	42 (37.2%)
Should be less rigorous	1 (2.0%)	1 (1.6%)	2 (1.8%)
Acceptable as it is	33 (67.3%)	35 (54.7%)	68 (60.2%)
Uncertain		1 (1.6%)	1 (.9%)
	49 (99.9%)	64 (100.1%)	113 100.1%)
Science			
Should be more rigorous	21 (42.9%)	34 (53.1%)	55 (48.7%)
Should be less rigorous	1 (2.0%)	1 (1.6%)	2 (1.8%)
Acceptable as it is	27 (55.1%)	28 (43.8%)	55 (48.7%)
Uncertain		1 (1.6%)	1 (.9%)
	49 (100%)	64 (100.1%)	113 (100.1%)
Social Studies			
Should be more rigorous	22 (44.9)	28 (43.8%)	50 (44.2%)
Should be less rigorous		2 (3.1%)	2 (1.8%)
Acceptable as it is	27 (55.1%)	33 (51.6%)	60 (53.1%)
Uncertain		1 (1.6%)	1 (.9%)
	49 (100%)	64 (100.1%)	113 (100%)
Summary of All Ratings			
Should be more rigorous	118 (40.1%)	175 (45.6%)	293 (43.2%)
Should be less rigorous	2 (.7%)	10 (2.6%)	12 (1.8%)
Acceptable as it is	173 (58.8%)	195 (50.8%)	368 (54.3%)
Uncertain		4 (1.0%)	4 (.6%)
No response	1 (.3%)		1 (.1%)
	294 (99.9%)	384 (100%)	678 (100%)

C. Extending the School Year

The following survey question asked NMSFs about extending the school year:

> In some nations, students attend school as many as 240 days a year as compared to about 180 days in the United States. How do you feel about extending the public school year by 30 days, making the school year about 210 days or 10 months? (The same question was asked in the 1992 Gallup/Phi Delta Kappa Poll.)

The responses to both the survey question and the Gallup Poll are summarized as follows:

Table # 27
Responses to Extending the School Year

	NMSFs	Gallup (Adults)
Favor	40 (35.4%)	55%
Oppose	44 (38.9%)	35%
Uncertain	27 (23.9%)	10%
No Response	2 (1.8%)	___
	113 (100%)	100%

Five students chose to explain why they opposed the extension of the school year. Representative comments follow: "I already waste 20-30 days of school per year doing pointless games, etc." "Improving the quality would be a heck of a lot more effective than just increasing the quantity." "Only if the curriculum is also extended."

D. High School Equipment and Facilities

NMSFs were asked to rate facilities and equipment available for student use in their high schools. The following table reports the percentages of the responses to each of fifteen different items:

Table # 28
Judgments of the Quality of Facilities and Equipment Available for Student Use
(113 Respondents from 63 Schools)

	Excellent	Good	Fair	Poor	Not Avlble	Total %
Library	18.0%	41.4%	30.6%	9.9%		99.9
Science Lab(s)	15.9%	43.9%	25.2%	12.1%	2.8%	99.9
Classrooms	14.3%	50.0%	31.3%	4.5%		100.1
Band/Orchestra Room	15.8%	41.6%	26.7%	6.9%	8.9%	99.9
Choral Room	18.4%	39.8%	27.6%	6.1%	8.2%	100.1
Auditorium/Theater	23.6%	39.1%	20.9%	7.3%	9.1%	100
Vocational Labs/Clsrms	15.6%	38.9%	25.5%		20.0%	100
Computers	33.6%	35.5%	18.7%	11.2%	.9%	99.9
Total	19.5%	41.4%	25.8%	7.4%	5.9%	100%

Gymnasium/Basketball	35.4%	50.0%	10.0%	3.6%	.9%	99.9
Swimming Pool	8.3%	21.1%	9.2%	4.6%	56.9%	100.1
Football Field	16.2%	35.2%	21.9%	14.4%	12.4%	100.1
Baseball Diamond	7.9%	22.8%	26.7%	13.9%	28.7%	100
Soccer Field	4.8%	24.3%	24.3%	6.8%	39.8%	100
Track	23.3%	33.0%	20.4%	15.5%	6.8%	100
Tennis Courts	14.1%	31.3%	23.6%	9.4%	21.7%	100.1
Total	15.9%	31.2%	19.3%	9.6%	23.9%	99.9%

Each of the eight academic facilities was judged to be Excellent or Good by more than half of the respondents. Computers received the most positive evaluation with 69.1% of the ratings at the Excellent or Good levels. With the exception of computers, however, each of the other seven academic facilities was reported to be Fair, Poor or Not Available by more than one-third of the respondents.

In an effort to determine the relationship of school size to these judgments, the data were disaggregated to compare the evaluations of students attending the sixteen schools enrolling up to 200 students with evaluations from the twelve schools enrolling from 1600 to 1800 students. The results are as follows:

Table # 28-A
Schools Enrolling Up To 400 Students
(Thirty Respondents from 24 Schools)

	Excellent	Good	Fair	Poor	Not Avlble	Total %
Library	10.0%	40.0%	40.0%	10.0%		100
Science Lab(s)	20.0%	36.7%	23.3%	10.0%	10.0%	100
Classrooms	23.3%	43.3%	33.3%			99.9
Band/Orchestra Room	13.3%	30.0%	23.3%	10.0%	23.3%	100
Choral Room	16.7%	26.7%	26.7%	6.7%	23.4%	100.2
Auditorium/Theater	30.0%	20.0%	20.0%	10.0%	20.0%	100.
Vocational Labs/Clsrms	23.3%	30.0%	23.3%		23.4%	100
Computers	46.7%	36.7%	10.0%	6.7%		100.1
Total	22.9%	32.9%	25.0%	6.7%	12.5%	100%

Gymnasium/Basketball	43.3%	43.3%	3.3%	6.7%	3.3%	99.9
Swimming Pool	3.3%		3.3%		93.3%	99.9
Football Field	20.0%	36.7%	23.3%	3.3%	16.7%	100
Baseball Diamond	6.7%	16.7%	10.0%	10.0%	56.7%	100.1
Soccer Field	3.3%	16.7%	3.3%		76.7%	100
Track	26.7%	30.0%	16.7%	16.7%	10.0%	100.1
Tennis Courts	20.0%	6.7%	16.7%	13.3%	43.3%	100
Total	17.6%	21.4%	10.9%	7.1%	42.9%	99.9%

Table # 28-B
Schools Enrolling More than 1600 Students
(Thirty-three Respondents from 10 Schools)

	Excellent	Good	Fair	Poor	Not Avlble	Total %
Library	27.3%	36.4%	27.3%	9.0%		100
Science Lab(s)	15.6%	43.8%	25.0%	15.6%		100
Classrooms	9.0%	51.5%	27.3%	12.1%		99.9
Band/Orchestra Room	24.1%	48.3%	13.8%	6.9%	6.9%	100
Choral Room	23.1%	53.8%	11.5%	3.8%	7.7%	99.9
Auditorium/Theater	27.3%	57.6%	12.1%	3.0%		100
Vocational Labs/Clsrms	4.2%	70.8%	16.6%		8.3%	99.9
Computers	45.2%	19.3%	22.6%	12.9%		100
Total	22.45	46.9%	19.9%	8.3%		100%
Gymnasium/Basketball	32.3%	51.6%	12.9%	3.2%		100
Swimming Pool	18.7%	46.9%	25.0%	6.3%	3.1%	100
Football Field	10.3%	10.3%	24.1%	31.0%	24.1%	99.8
Baseball Diamond	7.4%	22.2%	25.9%	25.9%	18.5%	99.9
Soccer Field	3.6%	25.0%	39.3%	13.8%	17.2%	99.9
Track	18.5%	25.9%	33.3%	18.5%	3.7%	99.9
Tennis Courts	6.7%	53.3%	26.7%	6.7%	6.7%	100.1
Total	14.2%	34.3%	26.5%	14.7%	10.3%	100%

A review of the totals reveals a difference between the ratings of the two size groups. Students in the small schools rated the eight academic items as Fair, Poor or Not Available more than half again as often (44.2%) as did students in the large schools (26.3%). The contrast between the two for the seven non-academic facilities is also significant, although not as great (60.9% vs 51.5%). (Note: This latter figure is affected by the absence of swimming pools and soccer fields at the small schools.)

A ranking of the fifteen items based upon the percentage of ratings at the Excellent and Good levels by all 113 of the respondents is as follows:

Table # 29
Ranking of Facilities and Equipment
Based on Ratings of Excellent and Good

Gymnasium/Basketball	85.4%
Computers	69.1%
Classrooms	64.3%
Auditorium/Theater	62.7%
Science Laboratories	59.7%
Library	59.4%
Band/Orchestra Room	57.4%
Track	56.3%
Vocational Labs/Clsrms	54.5%
Football Field	51.3%
Choral Room	48.2%

Tennis Courts	45.4%
Baseball Diamond	30.7%
Swimming Pool	29.4%
Soccer Field	29.1%

E. Most Serious Public School Problems

The following question, also taken from the Gallup/Phi Delta Kappa Poll, was asked:

> What do you think are the biggest problems with which the public schools in your community must deal?

The 113 respondents offered 155 answers to this question. The most frequent answers concerned student apathy and lack of motivation (15.5%) and insufficient financial support for the schools (14.8%).

The categories within which the problems are cited and the frequency of citations are provided in the following table:

Table# 30
Problems Confronting Public Schools

Students	
A. Apathy/Motivation	24 (15.5%)
B. Alcohol/Drugs	18 (11.6%)
C. Gangs/Crime	13 (8.4%)
D. Discipline/Authority	9 (5.8%)
E. Truancy/Drop Outs	6 (3.9%)
F. Teenage Pregnancy	2 (1.3%)
G. Pressure/Stress	2 (1.3%)
Finance/Overcrowding/Facilities	
A. Finances	23 (14.8%)
B. Overcrowding	6 (3.9%)
C. Facilities	3 (1.9%)
Curriculum/Grouping	
A. Rigor/Standards	7 (4.5%)
B. Priorities/Values	7 (4.5%)
C. Prejudice	5 (3.2%)
D. Grouping	5 (3.2%)
E. Quality	2 (1.3%)
F. Variety	1 (.6%)
Teachers	
A. Quality	4 (2.6%)
B. Low Pay	3 (1.9%)
C. Apathy	3 (1.9%)
D. Abusive	2 (1.4%)

Families	
A. Parental Involvement	4 (2.6%)
Other	
A. Administrators	1 (.6%)
B. Dress Codes	1 (.6%)
C. Resistance to Change	1 (.6%)
D. Societal Factors	1 (.6%)
	155 (99.6%)

The most frequently cited problems in the Gallup Poll were the "Lack of proper financial support" and the "Use of drugs," both listed by 22% of the respondents. The next four in order of frequency were "Lack of discipline" (17%), "Fighting/violence/gangs" (9%), and Large schools/overcrowding" (9%).

F. Improving Schools

Ninety-eight of the 113 students responded to the following question:

> "If you were allowed to make only one recommendation for improving the schools, what would that recommendation be?"

The categories within which recommendations are made and the frequency of the recommendations are provided in the following table:

Table # 31
Recommendations for Improving Schools

Teachers	19 (19.4%)
Curriculum/Grouping	17 (17.3%)
Academic Expectations/Courses	13 (13.3%)
Organizational Changes	10 (10.2%)
Facilities/Equipment	8 (8.2%)
Parent/Community Involvement	6 (6.1%)
Discipline	5 (5.1%)
Finances	5 (5.1%)
Athletics	5 (5.1%)
Other	10 (10.2%)
	98 (100.0%)

The following comments, quoted exactly as the students wrote them, convey the nature of each of the recommendations: (Note: NP= non-public school students.)

Teachers

> I would ask that they eliminate tenure so that teachers who can no longer handle their classes could be replaced by those who can.

> Give teachers better pay to attract more of the top-notch students to the profession.

Remove the teachers who are tired of teaching.

Pay teachers more, but also have higher hiring standards.

Stricter requirements to be able to teach.

Focus on hiring good teachers. They probably spend ten Xs the time on hiring a basketball coach.)

Stricter evaluation of teachers -some aren't worth much, but have "history in the school."

Don't just throw money at the problem; quality education requires quality teachers.

Better teachers.

Make sure the teacher knows what they're doing and can relate to students.

I would recommend that the schools raise their standards when they hire new teachers and also when they renew contracts of old ones.

Merit pay.

Allow gay teachers.

Salary increases for teachers who have been at school for several years.

Elevate the status of teachers so they get more money and provide them with excellent training. (NP)

Quit pandering to teachers' unions. Set high standards for teacher performance, and fire those who can't cut it.

Tougher requirements for teachers.

I would recommend that teachers supplement the text only and allow it to do the work of teaching.

Don't make education more boring than it already is. (Keep the good teachers, try new ones.) Semester evaluations for each teacher are good.

Curriculum/Grouping

More variety in the curriculum.

Better social programs, e.g., birth control, AIDS, smoking, sex, drugs and alcohol.

More alcohol, drug and sex education. (NP)

Give morality a bigger voice in the curriculum. (NP)

Teach Truth. (NP)

Re-instate the principles of Christian conduct and Biblical teachings. (NP)

Improve science education and offer opportunities for students to get more hands on training that will help them retain the knowledge they learn.

More support for the fine arts department.

More freedom given to students in choosing course of study.

Require extra-curricular participation.

Specialize - either become a strong academic school or a leading voc-tech school, but not both.

Design classes to be better for the individual student's learning speed. Not sure it could be done.

I would separate the achievers from the derelicts so that the achievers could get more out of school.

Further split classes according to ability.

Track kids - vocational track or college prep track. (NP)

Integrate young children of opposing economic classes and races.

Increase opportunity for independent study, individualization.

Academic Expectations/Courses

Lower grades need to be more demanding and have more opportunities to work ahead.

I would especially like the high school to offer accelerated and advanced placement courses.

More rigorous.

Make classes tougher. Students should learn everything they possibly can, not just everything presented. It's OK if not everyone ends up at the same place, but they all should be given a full chance to use their potential.

Expect more from both students and teachers.

Turning the school into a place where academics is accepted and desired.

Expect more out of students because they can accomplish more than they are.
Have advanced courses in elementary and middle school.

Demand quality, don't let some students "get by."

Wider availability of excellent, challenging courses.

More rigorous programs, perhaps even more school during the year.

Increase quality (standards) of education in elementary and junior high, carrying over to high school and available to all students.

Weight the G.P.A. scale.

Organizational Changes

Make it more college like - come and go as you please - determine your own future - at least for more talented students.

Make high schools more like universities.

It should be less like a "good little boys and girls" factory and more of a place where individual needs and viewpoints are respected.

Shorten school days so that students' concentration would last longer.

Alter educational system - use techniques proven to work in other areas of the country. More magnets.

Allow free competition (e.g. voucher system). (NP)

Reduce student-teacher ratio.

Focus on constructive academic reform.

Enhance our counseling program.

Make financial aid search more accessible for college-bound seniors.

Facilities/Equipment

Have adequate facilities.

More facilities available for use.

Build a second high school.

Better equipment.

Get new computers

Modernize science labs. (NP)

Minimum laboratory standards for the district.

Improve the school environment.

Parent/Community Involvement

Improve parental involvement.

Parents, support the teachers and get your children to work at school.

I would recommend that schools try to work more closely with students' parents when the student is very young.

The students must want to learn. This attitude must be instilled in the home. Parents must be motivated to encourage their children in learning from a young age. (NP)

Offer parents a choice where to send their children. (NP)

More community involvement.

Discipline

Stricter discipline. (NP)

There must be more discipline and a desire to learn.

Stop babying the students - make them behave and learn or kick them out.

Discipline should be on more serious issues, like drugs, violence, and so on, instead of less important issues like students being tardy to class.

Gangs, stress, drugs.

Finance

More government spending.

Increase spending for co-and extra-curricular programs.

Better appropriation of funds! Last time I heard, our debate or forensics squad receives $27,000, athletics gets as much as it needs and the fine arts don't receive much.

Competition, totally unrestricted with equal funding. (NP)

Use current funding more efficiently and cut excessive spending. (NP)

Athletics

De-emphasize sports.

Priorities should be academic-based, not athletic-based.

Spend less money on athletics.

Make sure the administration focuses on academics rather than athletics or other things.

Increased support (public) for learning and scholarship, (decreased emphasis on pro football, etc.).

Other

Adapt to changing times.

Fire the school board. (NP)

Help teens stay in school.

Put prayer back in.

Not overreact so much to nonexistent gangs,

Don't focus only on the at-risk students or the students who don't care. The motivated students deserve attention also.

Put God back in the schools! Studies of test scores and violence in schools show a sharp and continuing decline in scores since 1962 (prayer removed) and a sharp and continuing rise in school-site crime. Test scores have risen only in conjunction with an increase in private/Christian/home schools. (NP)

Remember what your purpose is: not spending money, or even teaching, but helping students learn (yes students).

Make the students more competitive.

There needs to be less bureaucratic B. S. to get in the way of the gifted program getting a decent computer. (NP)

XI. College/University Preferences

A. Preferred Institutions

Forty-three (38.1%) of the 113 respondents listed Kansas universities and colleges among the institutions they would like to attend. This represents a reduction from the 42% of the 1985 Semifinalists who, in a study conducted by the Kansas Legislative Department, stated a preference for Kansas institutions, and the 64% of the 1970 through 1980 Semifinalists who, according to a survey conducted by the Wichita Eagle-Beacon, actually did their undergraduate work in Kansas. (See Appendices X and XI.)

Females (40.8%) expressed more interest in Kansas institutions than did males (33.3%). The choices listed by all students are reported in the following table: (Totals exceed 43 because some students listed more than one institution.)

Table # 32
Preferred Kansas Colleges/Universities

	1st Choice		2nd Choice		3rd Choice		Total		Grand
	F	M	F	M	F	M	F	M	Total
Kansas State Univ.	4	4	2	5	3	5	9	14	23
Univ. of Kansas	3	2	1	6	5	5	9	13	22

Wichita State Univ.					1	1	1	1	2
Fort Hays State Univ.			1		1		2		2
Kansas Newman Coll.					1		1		1
Tabor College			1				1		1
Washburn University			1				1		1
St. Marys College	1						1		1
	8	6	6	11	11	11	25	28	53

Seventy (61.9%) students did not list any Kansas institution among the universities they would like to attend.

Ninety-two non-Kansas institutions were listed among the three choices of preferred colleges and universities. Forty-five of these were listed only once, 20 were listed twice. The following table describes the remaining 27, all of which were chosen three or more times.

Table # 33
Preferred Non-Kansas Colleges/Universities

	1st Choice		2nd Choice		3rd Choice		Total		Grand
	F	M	F	M	F	M	F	M	Total
Northwestern	3	3	3	1	0	3	6	7	13
Harvard	3	4	1	3	1	0	5	7	12
Yale	3	2	2	3	0	1	5	6	11
Duke	2	1	0	2	4	1	6	4	10
MIT	0	4	1	3	0	1	1	8	9
Washington	1	1	3	1	1	2	5	4	9
Rice	1	3	1	1	0	2	2	6	8
Drake	2	1	1	1	0	1	3	3	6
Grinnell	0	0	0	2	3	1	3	3	6
Southwest Missouri	1	0	4	0	1	0	6	0	6
Stanford	0	3	0	1	1	1	1	5	6
Cal. Tech.	0	1	1	2	0	1	1	4	5
Univ. of Michigan	0	3	0	1	0	1	0	5	5
Carnegie Mellon	0	0	0	2	0	2	0	4	4
Cornell Univ.	0	1	1	0	1	1	2	2	4
Harvey Mudd	0	2	0	1	1	0	1	3	4
Notre Dame	2	2	0	0	0	0	2	2	4
Princeton	0	1	1	1	0	1	1	3	4
Williams	0	1	1	0	2	0	3	1	4
Carleton	2	0	0	1	0	0	2	1	3
Columbia	0	1	1	1	0	0	1	2	3
Dartmouth	2	0	0	0	0	1	2	1	3
Georgetown	0	1	1	0	1	0	2	1	3
Johns Hopkins	1	2	0	0	0	0	1	2	3
N.E. Missouri State	0	2	0	0	0	1	0	3	3
Rose-Hulman Inst.	0	1	0	2	0	0	0	3	3
Trinity	2	0	0	0	0	1	2	1	3

B. Reasons Underlying First Choice

Students were asked to review a list of thirteen reasons for preferring an institution and to check all which applied to their first choice. The results are as follows:

Table # 34
Reasons Underlying First Choices of Colleges/Universities

	Female		Male		Total	
	#	%	#	%	#	%
Good academic reputation	44	89.8	58	90.6	102	90.3
Graduates get good jobs	31	63.2	39	60.9	70	61.9
Size	38	77.5	31	48.4	69	61.1
Graduates go to top Grad Schools	26	53.1	38	59.4	64	56.6
Promise of financial aid/schlshp	23	46.9	19	29.7	42	37.2
Friends' suggestions	13	26.5	20	31.3	33	29.2
Near home	15	30.6	9	14.1	24	21.2
Low tuition	8	16.3	12	18.7	20	17.7
Religious affiliation	9	18.4	9	14.1	18	15.9
Relatives' wishes	10	20.4	8	12.5	18	15.9
Reputation in sports	4	8.2	6	9.4	10	8.8
Guidance counselors' advice	4	8.2	3	4.7	7	6.2
Teachers' advice	2	4.1	5	7.8	7	6.2
Other	13	26.5	22	34.4	35	30.9

The "Other" category included such comments as "Location," Excellent engineering facilities," "Girl friend lives there," "Feel of the campus/people," "Scholarship halls," "Grew up in Michigan," "Would like to experience city life," "Good poly sci department," "Excellent writing program. Nice town, " "Variety of opportunities available," "Generally seems like it has the right atmosphere," "Strong in liberal arts, a Christian community, builds the students' character," "Prestige," "Professors interested, good for undeclared majors, computers in rooms," etc.

It should be noted that some students who checked "Size" preferred small institutions while others preferred large. Among the gender differences in responses: a higher percentage of females than males listed "Size" as a consideration, as was true, also, of the "Near home" item.

C. Factors Determining Actual Choice

In addition to identifying the reasons underlying their first choices, students were asked to list the factors which will determine which universities they will actually attend. As the following table indicates, financial considerations become dominant, listed by more than three out of four of the students.

Table # 35
Factors Determining Actual Choices of Colleges/Universities

	Female		Male		Total	
	#	%	#	%	#	%
Financial						
Aid/Scholarship	24		29		53	
Cost/Affordability	6		13		19	
Money	6		6		12	
Parental Financial Support	0		2		2	
	36	73.5	50	78.1	86	76.1
Acceptance/Admission	6	12.2	14	21.9	20	17.7
Academic Reputation	8	16.3	9	14.1	17	15.0
Location						
Location	1		8		9	
Distance from Home	5		3		8	
	6	12.2	11	17.2	17	15.0
Program Availability	4	8.2	12	18.8	16	14.2
Size	6	12.2	0		6	5.3
Campus	2	4.1	2	3.1	4	3.5
Other						
Quality of Student Life	1	2.0	2	3.1	3	2.7
Atmosphere	2	4.1	0		2	1.8
Religious Affiliation	2	4.1	0		2	1.8
Student-Teacher Ratio	1	2.0	1	1.6	2	1.8
Other	6	12.2	5	7.8	11	9.7

XII. Career Plans

A. Career Choices

B. Certainty of Choices

In response to the question, "Have you made a career choice?," 62.8% said "Yes" and 36.3% said "No." (One person did not answer the question.) More males (65.6%) than females (59.2%) responded "Yes." As the following table indicates, females are less certain about the choices they have made. (A "1" is "very certain" and a "5" is "very uncertain.")

Table # 36
Level of Certainty of Career Choices

Certainty Level	Females	Males	Total
1	3 (10.3%)	8 (19.0%)	11 (15.5%)
2	13 (44.8%)	16 (38.1%)	29 (40.8%)
3	3 (10.3%)	10 (23.8%)	13 (18.3%)
4	8 (27.6%)	6 (14.3%)	14 (19.7%)
5	2 (6.9%)	1 (2.4%)	3 (4.2%)
NR		1 (2.4%)	1 (1.4%)
	29 (99.9%)	42 (100.0%)	71 (99.9%)

At the time the students took the PSAT/NMSQT (October, 1991), each student was asked to indicate a career choice or to report "undecided." Four out of five (79.9%) of the 169 National Merit Semifinalists listed a career choice. (See Appendix IX.) One year later (November, 1992) when this group was surveyed, less than two out of three (62.8%) of the 113 respondents reported career decisions. The fluid nature of their career choices is revealed by those who listed a career but checked "3" (18.3%), "4" (19.7%) or "5" (4.2%) on the certainty scale.

The career preferences of the 71 students who listed choices are as follows:

Table # 37
Career Choices

Careers	Female	Male	Total
Business			
Business	0	1	1
Business Manager	0	1	1
Business Management	0	1	1
	0	3 (7.1%)	3 (4.2%)
Engineering			
Aerospace	0	1	1
Biochemical	1	0	1
Chemical	1	4	5
Electrical	0	1	1
Electrical/Aerospace	0	1	1
Engineering	3	4	7
Engineering or Medicine	0	1	1
Environmental	1	0	1
Mechanical	0	1	1
	6 (20.7%)	13 (30.9%)	19 (26.8%)
Fine and Applied Arts			
Art Gallery/Museum	1	0	1
Orchestra Conductor	0	1	1
Music Performance	0	1	1
Theater Design	1	0	1
	2 (6.9%)	2 (4.8%)	4 (5.6%)

Health and Medical Science			
Medicine	1	5	6
Physician	3	0	3
Surgeon	0	1	1
	4 (13.8%)	6 (14.3%)	10 (14.1%)
Humanities and Social Sciences			
Bio-Ethics	0	1	1
Bio-Ethics Law	0	1	1
Diplomacy/Intl Law	1	0	1
Geopolitical Analyst	0	1	1
Law	2	1	3
Psychologist	1	0	1
Social Worker	1	0	1
	5 (17.2%)	4 (9.5%)	9 (12.7%)
Science and Mathematics			
Bio-Chemistry	0	1	1
Bio-Chem/Molecular Biol	1	0	1
Biology	1	0	1
Computer Programmer	1	0	1
Mathematical Physicist	0	1	1
Molecular Biologist	0	2	2
Molecular Biol/Genetics	1	0	1
Molec/Biol/Research	0	1	1
Physicist	1	3	4
Research Bio-Chemist	0	1	1
Science/Math	0	1	1
Scientist	1	0	1
	6 (20.7%)	10 (23.8%)	16 (22.5%)
Other			
Architect	0	2	2
Elementary Education	1	0	1
High Schl Tcher-Gifted	1	0	1
Missionary	1	0	1
Music Educator	1	0	1
Political Journalist	1	0	1
Professor	0	1	2
Roto Rooter	0	1	1
Writer/Editor	1	0	1
	6 (20.7%)	4 (9.5%)	71 (100.0%)

As the previous table indicates, males chose careers in science related fields more frequently than females as follows:

	Female	Male
Engineering	20.7%	30.9%
Health and Medical Sciences	13.8%	14.3%
Science and Mathematics	20.7%	23.8
	55.2%	69.0%

Females selected careers within other fields more frequently:

Fine and Applied Arts	6.9%	4.8%
Humanities/Social Sciences	17.2%	9.5%
Other	20.7%	9.5%
	44.8%	23.8%

(Only males listed business related careers (7.1%).)

Table # 38 reports the responses to the following question: "When you have your college degree(s), if career opportunities are similar in several states, in which state would you most prefer to work?"

Table # 38
States Preferred for a Career

State	Female	Male	Total	
Kansas	11	13	24	(21.2%)
Colorado	3	7	10	(8.8%)
Washington	1	4	5	
California	1	3	4	
Illinois	3	1	4	
District of Columbia	3	0	3	
Massachusetts	2	1	3	
Maryland	2	0	2	
Missouri	0	2	2	
Texas	2	0	2	
Utah	0	2	2	
Arizona	0	1	1	
Florida	0	1	1	
Hawaii	0	1	1	
Montana	0	1	1	
New Hampshire	0	1	1	
North Carolina	0	1	1	
Oklahoma	0	1	1	
Oregon	0	1	1	
Pennsylvania	1	0	1	
Rhode Island	0	1	1	
South Carolina	0	1	1	
Vermont	0	1	1	
Virginia	0	1	1	
East Coast	0	1	1	
North	1	0	1	
Northeast	1	1	2	
Northwest	0	1	1	
Midwest	2	1	3	
Outside of the US	1	1	2	
Uncertain	16	21	37	(32.7%)
	50	71	121	

(Note: Numbers exceed 113 because some listed two choices.)

Only one out of five (21.2%) of the respondents listed Kansas as the state in which they would prefer to spend their careers. However, an additional 32.7% reported that they were uncertain as to where they would prefer to work.

"The Kansas Brain Drain," the series of articles which appeared in the Wichita Eagle-Beacon (February, 1986), reported that nearly 60% of the surveyed Kansas NMSFs who were named between 1970 through 1980 chose to pursue their careers outside of Kansas. It is possible that an even higher percentage of this current NMSFs' group will choose to work elsewhere.

XIII. Summary

Personal Characteristics

Nearly two out of three (63.3%) of all Kansas NMSFs are males. Ninety-two percent of the respondents identified themselves as Caucasian-Americans, 6.2% as Asian-Americans, and 1.8% as Native Americans. Fifteen (13.2%) of the respondents said that they are fluent in a language other than English. NMSFs are within the normal age range for high school seniors, although females are on average six months younger than males.

Family Characteristics

NMSF parents are unusually stable and well educated. Only one biological parent is deceased. Ninety percent are still married to each other. Eighty percent of the fathers and 68% of the mothers have bachelor's or higher degrees. The most frequent degree pattern (28.3%) within a family is one parent with a bachelor's degree, the other with a master's degree or higher. The most frequent occupation for the father is engineering (12.4%) followed by managerial positions (10.6%). Mothers are most often employed in education (22.1%) and as homemakers (19.5%). The estimated family income for 60.2% of the families is $50,000 and over.

Nearly 90% (87.5%) of the families have three or fewer children. More than half (52.7%) have only one or two children. Sixty-two percent of the NMSFs are either only children (12.4%) or first-born (49.6%).

High Schools Attended

There are 357 public high schools in Kansas, 57 of which enroll 84% of the NMSFs. There are also 27 private/parochial high schools, 12 of which enroll 16% of the NMSFs. This means that 18% (69 out of 384) of the state's high schools produce all of the NMSFs.

Forty percent of the public high school NMSFs attend high schools which enroll 19.3% of the state's public high school students. These are the high schools with student populations of 1600 or more. In contrast, 15.5% of the NMSFs come from those 37.5% of the public high school students who attend school enrolling fewer than 400 students. The comparative ratios of NMSFs per one thousand students are .025 for the large schools and .005 for the small, a dramatic difference.

Per student expenditures do not appear to be related to the number of NMSFs produced, although if expenditures for instruction are separated from total costs, there may be a correlation.

A review of adults' per capita income in counties which produce a high proportion of NMSFs

reveals no consistent pattern. However, there is a relationship between adults' educational level and ratios of NMSFs as indicated by the following.

Twenty-six high schools in five counties: Douglas, Johnson, Riley, Sedgwick, and Shawnee, produce 66.2% of the public school NMSFs. Each of these counties exceeds the state's average of 21.2% of adults over 25 who have a bachelor's degree or higher. Douglas (38.4%), Johnson (40.5%), and Riley (34.3%) are the most highly educated of all counties by a considerable margin and together account for 43.7% of the NMSFs. The ratio of NMSFs to every one thousand 11th graders in these three counties exceed the state's average of .507 as follows: Douglas -1.632, Johnson - 1.035, and Riley - 1.883.

Extra-Curricular Activities

NMSFs report frequent participation in extra-curricular non-sport activities in high school, an average of 4.52 activities per person. Females are more involved (4.75) than are males (4.03). Most frequent activities are honor societies (76.9%) and student clubs (76.9%). More than 40% participate in service organizations (44.2%) and student government (41.6%).

Students are less active in extra-curricular sports, averaging 1.22 per person, with males more active (1.47) than females (.90). Tennis and basketball are females' favorite intramural and varsity sports. Males prefer basketball, football and track, in that order.

NMSFs average 1.38 community-based activities per person. Females and males participate equally. Approximately 40% of both genders are active with religious organizations.

Leadership Positions

Four out of five NMSFs hold leadership positions while in high school, averaging 2.14 positions for females and 1.83 positions for males. Leadership roles with publications (yearbook, newspaper, literary magazine) are most frequent (24.8%), followed by student council (23.0%).

Part-Time Work

More than half (57.5%) of the NMSFs report holding part-time jobs during the school year, the percentage being slightly more for females (59.2%) than for males (56.3%). During the junior year, females averaged ten hours of work each week; males averaged 13.4. During the senior year, average work hours increased for females to 11.3 and remained the same for males.

Employment during the summer increased to 65.6%. The increase was greater for males (from 56.3% to 68.7%) than for females (from 59.2% to 61.2%).

Employment both during the school year and the summer included a wide range of activities, although jobs are found most frequently within the fast food industry and groceries. Relatively few of the jobs reported are academic in nature.

Travel Experiences Outside of the United States

Nearly two out of three of the NMSFs have traveled outside of the United States. Of these, 39.4% have gone to the contiguous countries of Mexico and/or Canada, 43.7% to one or more European countries, and 16.9% to a combination of countries, including those in South America and Asia.

High School Programs

Nearly eight out of ten (78.8%) of the NMSFs report that accelerated or Advanced Placement courses are available in their schools, ranging in number from one to 50. The number of courses offered is affected by the size of the school. Twenty-two of the 23 students who report that their schools offer no classes attend schools enrolling less than 700. Schools which offer ten or more classes enroll more than 900 students.

Students who actually take these courses (70.8%) report taking from one to 18. Fifty percent of these students will have taken from three to five of the courses by the time they graduate.

In addition, 42.5% report that their high schools provide opportunities to take college courses taught by college or university instructors. Thirty percent of the 113 NMSFs indicate that they have taken such courses.

As a result of the availability of the Advanced Placement courses and the college courses taught by college or university instructors, 72.6% of the NMSFs report that they will have earned college credit prior to graduation from high school. Most of these (40.2%) will have earned from one to six semester hours. However, 36.6% will have accumulated more than ten hours. One student reports 64 semester hours of earned credit, the equivalent of two years of college.

All 113 respondents have studied a foreign language, more than one-third (36.2%) of these for four or more years. Eighteen (15.9%) have studied two languages. Spanish is the language or choice for 50.4% of the students.

All of the NMSFs report high grade point averages ranging from 3.33 to 4.80. The overall GPA for females is 4.11. For males it is 3.94. (It should be noted that many high schools use a weighted grading formula which assigns a 5.0 to an "A" achieved in Advanced Placement or accelerated courses.

Judgments Concerning Public Schools

According to the 1992 Annual Gallup/Phi Delta Kappa Poll, 40% of the adults grade their communities' public schools "A" (9%) or "B" (31%). NMSFs look much more favorably on their public schools, assigning 78.7% "A" (28.2%) or "B" (50.5%).

NMSFs are even more positive about their public school teachers awarding 86.4% of them "A" (35.9%) and "B" (50.5%).

At the same time, only slightly more than half (53.1%) are satisfied with the level of rigor which they experienced in their academic programs. The greatest level of dissatisfaction is at the junior high/middle school level; 56.6% recommended more rigor during these school years. The highest level of satisfaction is with high school humanities; 65.5% find the rigor to be acceptable as it is.

In response to a question about extending the school year from 180 days to 210, 35.4% of the NMSFs are in favor, 38.9% are opposed and 23.9% are uncertain. (Two, 1.8%, did not answer the question.) In the Gallup/Phi Delta Kappa Poll, adults responded more positively with 55% favoring the action, 35% opposed, and 10% uncertain.

Students were asked to rate the quality of the facilities and equipment available for use in their

schools. While 85.4% rated their gymnasiums "excellent" or "good," only 59.4% rated their libraries at this level. Each of eight academic facilities was judged to be "excellent" or "good" by more than half of the respondents. Computers received the most positive evaluation with 69.1% at the "excellent" or "good" levels. With the exception of computers, however, each of the other seven academic facilities (library, science laboratories, classrooms, band/orchestra room, choral room, auditorium/theater, and vocational laboratories/classrooms) was reported to be "fair," "poor" or "not available" by more than one-third of the respondents.

School size affected the judgment of facilities and equipment. Students in small schools (400 or fewer students) rated academic items "fair," "poor" or "not available" more than half again as often as did students in the large high schools (1600 or more students).

When NMSFs were asked to list the biggest problems with which the public schools in their communities must deal, the following seven concerns were most frequently listed, accounting for 65.1% of all responses: student apathy/motivation (15.5%), finances (14.8%), alcohol/drugs (11.6%), gangs/crime (8.4%), discipline/authority (5.8%), rigor/standards (4.5%), and priorities/values (4.5%).

This contrasts with the adults' responses in the Gallup Poll: lack of proper financial support (22%), use of drugs (22%), lack of discipline (17%), fighting/violence/gangs (9%), and large schools/overcrowding (9%).

Sixty percent of the NMSFs recommendations for improving the schools focused on four areas: teachers (19.4%), curriculum/grouping (17.3%), academic expectations/courses (13.3%), and organizational changes (10.2%).

College/University Preferences

Forty-three (38.1%) of the 113 respondents listed Kansas colleges and universities among the three institutions they would like to attend. Twenty-six percent (26.4%) of these were first choice listings, 32.1% were second, and 41.5% were third. Four of the six Regents' universities were chosen as follows: Kansas State University (23 students), University of Kansas (22 students), Wichita State University (2 students), and Fort Hays State University (2 students). One student each choose Kansas Newman College, Tabor College, Washburn University, and St. Mary's College. (Numbers total more than 43 because some students listed more than one Kansas institution.)

Seventy (61.9%) students did not choose any Kansas institution. Ninety-two non-Kansas colleges and universities were listed among their three choices. Forty-five of these were listed only once; 20 were listed twice. Of the remaining 27, only four were chosen by ten or more students: Northwestern (13), Harvard (12), Yale (11), and Duke (10).

Students were asked to review a list of 13 reasons for preferring an institution and to check all which applied to their first choice. Four reasons were chosen by more than half of the respondents: good academic reputation (90.3%), graduates get good jobs (61.9%), size (61.1%), and graduates go top graduate schools (56.6%). Three reasons were chosen by less than 10%: reputation in sports (8.8%), guidance counselors' advice (6.2%), and teachers' advice (6.2%).

When students were asked to list the factors which will determine which colleges/universities they will actually attend, 76.1% cited financial considerations.

Career Plans

More than one-third (36.3%) of NMSFs have not made a career choice. More males (65.6%) than females (59.2%) have chosen a career. On a certainty scale of "1" being "very certain" and "5" being "very uncertain," 56.3% of those who have listed a career choice are at the "1" or "2" levels while 44.7% are at the "3" (18.3%), "4" (19.7%), or "5" (4.2%) levels.

The career preferences of the students who have listed choices differ by gender as follows:

	Female	Male
Engineering	20.7%	30.9%
Health and Medical Sciences	13.8%	14.3%
Science and Mathematics	20.7%	23.8%
Fine and Applied Arts	6.9%	4.8%
Humanities/Social Sciences	17.2%	9.5%
Business		7.1%
Other	20.7%	9.5%
	100%	99.9%

Only one out of five (20.2%) of the respondents listed Kansas as the state in which they would prefer to spend their careers. Twenty-eight other states or regions were listed, Colorado being selected most often (8.8%). Nearly one-third (32.7%) indicated that they were "uncertain" about a preferred place to spend their careers.

XIV. Afterward

The purpose of this study is to describe the Kansas 1993 class of National Merit Semifinalists. The survey questionnaire, to which two-out-of-three of these students responded, was designed to collect information about their personal and family characteristics, their travel experiences outside of the United States, their high schools, selected aspects of their high school programs, their extra-curricular activities, their leadership positions, part-time jobs they have held, their judgments about public schools and teachers, their preferences for colleges and universities, and their career plans. Section XIII summarizes much of this information which is detailed in the earlier sections.

The data do provide a better understanding of many of the dimensions of these exceptional students. If there are some people, for example, who have assumed that these extraordinary scholars are reclusive introverts who spend all of their time reading books, this study paints a dramatically different picture. As reported earlier, typical NMSFs are frequently chosen by their school peers for leadership positions, averaging two such positions per person. They are team members in varsity and intramural sports (1.22 sports per person). They are active participants in extra-curricular programs, both in school (4.52 activities per person) and in the community (1.38 activities per person). In addition, the majority hold part-time jobs, averaging ten hours a week during the school year. As indicated at the beginning of this report, for these and other reasons, NMSFs should be celebrated and praised in addition to being studied and profiled.

But some readers may hope for more than various profiles which the data describe. What general conclusions can be drawn from all of the information in this study? Are there concerns which should be addressed? Do the data suggest recommendations for action?

While it is tempting to try to write some definitive statements in response to these questions, it is important to recognize that the data have their limitations and that additional research is needed.

There is a tendency, for example, to judge high schools with a higher ratio of National Merit Semifinalists as being better than other schools. The National Merit Scholarship Corporation warns against this by printing the following in the front of a publication which lists the names and schools of the 1993 Semifinalists:

> **Caution**: The National Merit Scholarship Program honors individual students who show exceptional academic ability and potential for success in rigorous college studies. The program does not measure the quality or effectiveness of education in a school, system, or state.
>
> It is important to keep in mind that Semifinalists are allocated by state, in numbers that represent each state's percentage of the nation's graduating high school seniors. Further, the number of Semifinalists in a particular school can be influenced by many factors, including: the size of the school and the proportion of its students who enter the Merit Program by taking the qualifying test;

the depth and breadth of a school's curricular offerings and the extent to which its students take advantage of the highest level courses. The number of Semifinalists in a school may also be affected by family and community attitudes toward academic achievement, educational levels and attainments of the adult population, and the degree of support for the school.

For these and many other reasons, Semifinalist data are meaningful and valid *only* when they are interpreted within the framework of the Merit Program; such data cannot be used to compare secondary schools, educational systems, or states. Misuse of Merit Program data will lead to unsound and erroneous conclusions.

This study's data do substantiate two concerns which need to be addressed not only in Kansas, but in the nation:

1. The under-representation of females among NMSFs. Females score less well on both the Verbal and the Mathematical sections of the PSAT/NMSQT. (See Appendix II.) At the same time they get higher grades than do males in high school and college. Is the PSAT/NMSQT biased against females? Do females select courses which are less demanding? Do school counselors and parents direct gifted females away from the more rigorous programs, especially those in science and mathematics? Are teachers and professors more lenient in grading females? This under-representation must be examined critically if strategies are to be implemented which will enable females to realize their potential and gain equal access to the scholarship opportunities which the Merit Program provides.

2. The under-representation of Black and Hispanic Americans among NMSFs. While the National Merit Scholarship Corporation has established the Achievement Program to honor academically promising high school students who are Black Americans and to complement the Merit Program, that initiative essentially acknowledges the under-representation of Blacks among Semifinalists. Several school districts across the nation have begun to address the challenge of reducing the "achievement gap" - the data which reveal the differences in academic performance between Caucasians and Hispanic-Americans and Black-Americans. The expectations which teachers have for performance have been a particular focus, as have been the roles of counselors and parents. Claims have been made that the PSAT/NMSQT have been biased against minorities. It is essential that the causes for this serious under-representation be defined precisely and that initiatives be taken to close the gap. The negative personal and social consequences of this circumstance are too serious to ignore. The United States falls far short of its promise until this problem is remedied.

There are also two additional concerns which Kansans have previously expressed, sometimes referred to as the "Brain Drain":

1. The small number of NMSFs who prefer Kansas colleges and universities. A Wichita Eagle-Beacon study, published in a series of articles in February of 1986, reported that 63% of the Kansas NMSFs who were named from 1970 through 1980 had done their undergraduate work in Kansas. Later studies conducted by staff in the Kansas Legislative Research Department reported that 41% of the responding 1986 Kansas Semifinalists planned to attend a Kansas university or college, with the percentage rising the next year to 46%, but only fourteen (12.4%) name one as a first choice. Forty-three (38.1%) of the 113 respondents from the 1993 class of Semifinalists list Kansas universities and colleges among

the institutions they would like to attend. Seventy (61.9%) listed only institutions outside of Kansas. While a follow-up study next fall might reveal a higher percentage actually attending school in Kansas, it is likely that a majority will have left the state for their undergraduate education.

These very able students are heavily recruited by many prestigious universities. Ninety percent of the NMSFs in this study cite "a good academic reputation" as the reason for listing an institution as a first choice. At the same time 70% indicate that financial considerations will dictate where they actually attend. (Harvard, Yale, Stanford, Princeton, Massachusetts Institute of Technology offer no College-sponsored Merit Scholarships. Nevertheless, they collectively enroll more than 800 Finalists.) Kansas institutions with strong academic reputations which also offer attractive scholarships should be able to enroll larger numbers of NMSFs. Currently only three Kansas institutions provide a total of 58 of the College-sponsored Merit Scholarships: Kansas State University-14, University of Kansas-40, and Wichita State University-four. Fifty-eight provide the prospect for financial aid to less than one-third of the 169 NMSFs in the class of 1993.

2. The small number of NMSFs who predict that they will spend their careers in Kansas. The Wichita Eagle-Beacon study revealed that nearly 60% of the NMSFs left Kansas to pursue their careers. In this study, only one-out-of-five (20.2%) of the respondents listed Kansas as the state in which they would prefer to spend their careers, although an additional 32.7% reported that they were uncertain as to where they will want to work. The evidence indicates that there is reason to continue to be concerned about the "brain drain."

The remainder of this Afterward will be devoted to a brief reprise and some reflective questions concerning a few selected findings in the report. If some answers to the questions are carefully derived, it may be possible to establish directions for constructive action.

1. Birth Order

What is the explanation for the high percentage of first-borns and only-children (61.9%) among the NMSFs? Is it a reflection of the family picture album or video tape phenomenon, i.e., much more attention is paid to the first-born than to subsequent children? Should parents make a more conscious effort to stimulate and nurture children who come after the first one?

2. Judgments of Public Schools and Teachers

When only 40% of the general public grades public schools "A" (9%) or "B" (31%), why do 78.7% of the NMSFs evaluate their public schools so highly, awarding 28.2% "A" and 50.5% "B," with 86.5% judging their teachers to be at the "A" (35.9%) or "B" (50.5%) levels? Do schools and teachers respond more positively to these gifted students? Do these students get the best teachers? Are the NMSFs responding to the quality of their accelerated or Advanced Placement courses? Would other students judge their schools and teachers less favorably? What would the judgments of drop-outs be?

3. Judgments of Facilities and Equipment

What message does it send to students, school boards, administrators, and the general public when 85.4% of the NMSFs judge their gymnasiums to be "Excellent" of "Good," while libraries receive only 59.4% of these ratings and science laboratories 59.7%? Will communities look anew at their priorities when they learn that more than one-third of the NMSFs consider seven academic facilities to be "Fair," "Poor," or "Not Available?"

4. Academic Rigor

More than half of the NMSFs judge the academic rigor to be acceptable in elementary schools and in high school English/Humanities, Mathematics, Science and Social Studies courses. However, 56.6% believe that academic programs should be more rigorous at the junior high/middle school level. Are the schools not challenging students enough during these transitional years? Are middle schools giving disproportionate attention to "exploration" and "socialization?"

5. Effect of School Size

In general, small high schools, enrolling fewer than 400 students, are less likely to offer accelerated or Advanced Placement courses, more likely to have their facilities judged negatively by NMSFs, and have a markedly lower ratio of NMSFs per thousand students (.005) than do large high schools (.025) enrolling 1600 or more students. What are the variables which enable the large schools to produce a higher proportion of NMSFs? What influences have been at work on the NMSFs attending very small schools? More than half (59.4%) of all public high schools in Kansas enroll fewer than 200 students. Nearly 30% enroll fewer than 100. Are small schools fully utilizing technology (distance learning, for example) to strengthen their academic programs? Should some of these schools be consolidated?

6. Effect of Adults' Educational Levels

In Kansas, 21.6% of all adults over the age of 25 have achieved the bachelor's or higher degrees in contrast to 74.4% of the parents of NMSFs. In 61.9% of the NMSF family units, both parents have received the bachelor's or higher degrees. Out of the 226 parents, only 19 (8.4%) have not had some college, while 87 (38.5%) have a master's degree or higher. NMSFs have parents who model educational achievement. Moreover, the high schools with the most favorable ratios of NMSFs per thousand students are located in the most highly educated counties. Is the educational level of NMSF's parents and all community adults the significant variable in producing National Merit Semifinalists?

7. Effect of a Specific Program

A former school superintendent (now retired), Mr. Herbert Sang, believed a rigorous academic program which challenged gifted students would result in a marked increase in the number of students who would qualify as National Merit Semifinalists. In 1982, when he was serving Duvall County (Florida) as superintendent, he launched the Potential National Scholars Program. In an article titled "In Grooming National Merit Scholars, We Foster Academic Excellence for All" (The American School Board Journal, October, 1987), Mr. Sang reported that within five years the number of NMSFs from Jacksonville High Schools doubled. Other benefits from the program included increases in

the number of students in Advanced Placement courses, increases in the number of black students in advanced courses, and increases in the number of high school juniors taking the PSAT/NMSQT. The program began with the identification of fifth grade students with high academic potential. Through grade eight these students were enrolled in a Local School Scholars Program. In grade nine they were inducted into the Potential National Merit Scholars Program. Advanced courses, tutorial experiences, preparation for test-taking, and special recognition activities were among the program's features. Over 2,500 students (out of a total student enrollment of over 100,000) participated each year.

Some critics describe such programs as elitist. Scholars have questioned the benefits which are claimed for the tracking which is commonly a part of such designs. Others are fearful that programs for the gifted are likely to emphasize only the first two of the seven intelligences which psychologist Howard Gardner has described in his book Frames of Mind: linguistic, logical-mathematical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and musical.

The public schools have an obligation to develop the full potential of all students, whatever their strengths and weaknesses. It is hoped that this study has contributed information which will assist in understanding and better serving academically talented students who are or may become National Merit Semifinalists.

XV. Appendices

Appendix I

PERCENTAGE OF MALES/FEMALES TAKING THE PSAT/NMSQT

	National		Kansas	
	M	F	M	F
1991	44.7	55.3	44.3	55.7
1990	44.9	55.1	44.0	56.0
1989	45.1	54.9	44.5	55.5
1988	45.2	54.8	44.8	55.2
1987	45.2	54.8	45.5	54.5
1986	45.3	54.7	45.5	54.5
1985	45.5	54.5	44.7	55.3
1984	45.7	54.3	44.6	55.4

Source: PSAT/NMSQT Summary Report - Kansas: National, Regional and State Data for College-Bound Juniors. The College Board. New York, NY. 1984 through 1991.

PSAT/NMSQT MEAN SCORES
NATIONAL AND KANSAS

Verbal

	84	85	86	87	88	89	90	91
Male								
National	41.5	41.5	41.6	41.1	41.1	40.9	41.1	41.4
Midwest	41.8	41.6	41.8	41.1	41.3	41.2	41.6	42.0
Kansas	42.2	42.5	42.6	42.1	42.1	42.1	42.2	42.3
Female								
National	40.5	40.3	40.3	39.8	40.4	39.6	39.9	39.9
Midwest	40.9	40.6	40.6	39.7	40.8	39.7	40.4	40.5
Kansas	41.4	41.5	41.6	40.6	41.8	40.7	41.1	41.3
Total								
National	41.0	40.9	40.9	40.4	40.7	40.2	40.4	40.6
Midwest	41.3	41.0	41.1	40.3	41.0	40.4	40.9	41.1
Kansas	41.8	42.0	42.1	41.3	41.9	41.3	41.6	41.8

Math

	84	85	86	87	88	89	90	91
Male								
National	46.5	47.3	47.2	47.3	47.7	46.5	47.3	47.4
Midwest	47.5	48.1	47.9	48.0	48.5	47.4	47.9	48.3
Kansas	47.8	48.9	48.7	49.3	49.4	48.5	48.7	48.9
Female								
National	42.3	43.2	43.1	43.2	44.0	42.6	43.1	43.9
Midwest	43.3	43.9	43.8	43.9	44.7	43.2	43.6	44.6
Kansas	43.7	45.0	44.7	45.0	45.6	44.4	44.2	45.4
Total								
National	44.2	45.0	45.0	45.0	45.6	44.4	45.0	45.5
Midwest	45.2	45.8	45.7	45.7	46.4	45.1	45.5	46.2
Kansas	45.6	46.8	46.5	47.0	47.3	46.2	46.2	46.9

Source: PSAT/NMSQT Summary Report - Kansas: National, Regional and State Data for College-Bound Juniors. The College Board. New York, NY. 1984 through 1991.

Kansas School Districts and High Schools Enrolling the 1993 National Merit Semifinalists

Unified School District	High School (s)	Number of National Merit Semifinalists
200 Greeley County	Greeley County High School	1
202 Turner-Kansas City	Turner High School	1
213 West Solomon Valley Schools	Lenora High School	1
229 Blue Valley	Blue Valley High School	2
	Blue Valley North High School	3
230 Spring Hill	Spring Hill High School	1
233 Olathe	Olathe North High School	1
	Olathe South High School	3
253 Emporia	Emporia High School	2
259 Wichita	Wichita High School East	7
	Wichita High School Heights	2
	Wichita High School North	1
	Wichita High School Northwest	4
	Wichita High School Southeast	7
	Wichita High School West	1
266 Maize	Maize High School	1
290 Ottawa	Ottawa High School	1
292 Wheatland	Wheatland High School	1
305 Salina	Salina High School Central	1
308 Hutchinson Public Schools	Hutchinson High School	3
318 Atwood	Atwood High School	2
335 North Jackson	Holton High School	1
364 Marysville	Marysville High School	1
373 Newton	Newton High School	1
375 Circle	Circle High School	1
376 Sterling	Sterling High School	1
378 Riley County	Riley County High School	1

383 Manhattan	Manhattan High School	8
384 Blue Valley	Blue Valley High School	1
385 Andover	Andover High School	1
390 Hamilton	Hamilton High School	1
392 Osborne County	Osborne High School	1
416 Louisburg	Louisburg High School	2
418 McPherson	McPherson High School	3
437 Auburn-Washburn	Washburn Rural High School	1
440 Halstead	Halstead High School	1
443 Dodge City	Dodge City High School	3
450 Shawnee Heights	Shawnee Heights High School	2
453 Leavenworth	Leavenworth High School	3
457 Garden City	Garden City High School	2
460 Hesston	Hesston High School	1
464 Tonganoxie	Tonganoxie High School	1
465 Winfield	Winfield High School	2
473 Chapman	Chapman High School	2
480 Liberal	Liberal High School	1
497 Lawrence	Lawrence High School	12
500 Kansas City	Sumner Academy of Arts and Sciences	4
501 Topeka Public Schools	Highland Park High School	1
	Topeka High School	3
	Topeka West High School	2
503 Parsons	Parsons High School	1
504 Oswego	Oswego High School	1
512 Shawnee Mission Public Schools	Shawnee Mission East High School	14
	Shawnee Mission North High School	5
	Shawnee Mission Northwest High School	5
	Shawnee Mission South High School	4
	Shawnee Mission West High School	2
Forty-Four (44) Districts	Fifty-Seven (57) High Schools	142 Semifinalists

Private Schools Enrolling 1993
National Merit Semifinalists
(and Unified School Districts with which They are Associated Geographically)

Unified School District	High School (s)	Number of National Merit Semifinalists
206 Leon	Berean Academy (Elbing)	2
229 Blue Valley	Hymand Brand Hebrew Academy (Overland Park)	1
	St. Thomas Aquinas High School (Overland Park)	3
233 Olathe	Berean Christian School	1
259 Wichita	Bishop Carroll High School	3
	Kapaun-Mount Carmel High School	6
	Pilgrim Christian School	1
	Wichita Collegiate School	3
489 Hays	Thomas More Preparatory-Marian High School	2
501 Topeka Public Schools	Hayden High School	2
	Knollwood Baptist High School	1
512 Shawnee Mission Public School	Bishop Miege High School	2
	Twelve (12) High Schools	27 Semifinalists

HIGH SCHOOLS ENROLLING NATIONAL MERIT SEMIFINALISTS
GROUPED BY SIZE

Total Student Body

0 - 50

Hamilton High School 32 (1)
Lenora High School 43 (1)
Olathe - *Berean Christian School 28 (1)
Overland Park - *Hyman Brand Hebrew Academy 20 (1)
Topeka - *Knollwood Baptist High School 11 (1)
Wichita - **Pilgrim Christian School ? (1)

51 - 100

Grainfield - Wheatland High School 91 (1)
Randolph - Blue Valley High School 71 (1)

101 - 150

Atwood High School 121 (2)
Holton High School 148 (1)
Osborn High School 140 (1)
Oswego High School 117 (1)
Tribune - Greeley County High School 145 (1)

151 - 200

Elbing - *Berean Academy 180 (2)
Riley County High School 153 (1)
Sterling High School 160 (1)
*Wichita Collegiate School 185 (3)

201 - 300

Halstead High School 219 (1)
Hays - *Thomas More Preparatory Marian High School 269 (2)
Hesston High School 211 (1)
Louisburg High School 242 (2)
Tonganoxie High School 272 (1)

301 - 400

Chapman High School 383 (2)
Marysville High School 334 (1)
Spring Hill High School 391 (1)
Towanda - Circle High School 346 (1)

401 - 500

Andover High School 497 (1)
Overland Park - *St. Thomas Aquinas High School 420 (3)
Topeka - *Hayden High School 471 (2)

501 - 600

Ottawa High School 570 (1)
Parsons High School 525 (1)
Tecumseh - Shawnee Heights High School 549 (2)

601 - 700

Kansas City - Turner High School 679 (1)
McPherson High School 674 (3)

Wichita - *Bishop Carroll High School 695 (3)
Wichita - *Kapaun Mount Carmel High School 649 (6)
Winfield High School 683 (2)

701 - 800

Maize High School 704 (1)

801 - 900

Liberal High School 888 (1)

901 - 1000

Kansas City - Sumner Academy of Arts and Sciences 935 (4)
Manhattan High School 913 (8)
Newton High School 925 (1)
Overland Park - Blue Valley North High School 982 (3)
Salina High School Central 996 (1)
Shawnee Mission - *Bishop Miege High School 942 (2)
Topeka - Highland Park High School 953 (1)

1001 - 1200

Dodge City High School 1153 (3)
Leavenworth High School 1069 (3)
Topeka - Washburn Rural High School 1030 (1)

1201 - 1400

Emporia High School 1245 (2)
Hutchinson High School 1312 (3)
Olathe South High School 1224 (3)
Topeka West High School 1217 (2)
Wichita High School Heights 1291 (2)

1401 - 1600

Olathe North High School 1562 (1)
Shawnee Mission North High School 1591 (5)
Stilwell - Blue Valley High School 1517 (2)
Wichita High School Northwest 1545 (4)
Wichita High School West 1470 (1)

1601 - 1800

Garden City High School 1666 (2)
Prairie Village - Shawnee Mission East High School 1645 (14)
Shawnee Mission Northwest High School 1689 (5)
Wichita High School North 1618 (1)
Wichita High School Southeast 1699 (7)

1801 - 1829

Lawrence High School 1804 (12)
Shawnee Mission South High School 1822 (4)
Shawnee Mission West High School 1819 (2)
Topeka High School 1813 (3)
Wichita High School East 1829 (7)

*Private School

Source of Enrollment Data: Kansas Educational Directory 1991-92, Kansas State Board Education. Topeka.

SUMMARY

Size	# of Schools	#of National Merit Semifinalists
0-50	6 (*4)	6 (*4)
51-100	2	2
101-150	5	6
151-200	4 (*2)	7 (*5)
201-300	5 (*1)	7 (*2)
301-400	4	5
401-500	3 (*2)	6 (*5)
501-600	3	4
601-700	5 (*2)	15 (*9)
701-800	1	1
801-900	1 (*1)	1
901-1000	7	20 (*2)
1001-1200	3	7
1201-1400	5	12
1401-1600	5	13
1601-1800	5	29
1801 +	5	28
	69 (*12)	169 (*27)

*Private Schools/Semifinalists

Number of 1991-92 Eleventh Grade Students (and National Merit Semifinalists) by County

0-50 Students

Chase	42
Chataqua	40
Cheyenne	41
Clark	31
Comanche	34
Decatur	38
Edwards	41
Gove	49 (1)
Graham	40
Greeley	30 (1)
Hamilton	32
Haskell	48
Hodgeman	33
Jewell	49
Kiowa	50
Lane	35
Logan	50
Osborne	38 (1)
Rawlins	40 (2)
Sheridan	33
Stanton	24
Trego	44
Wallace	31
Wichita	36
Woodson	44

25 counties
5 National Merit Semifinalists

973 Students
Ratio= .513

51-100 Students

Barber	61	Morris	76	Rush	55
Elk	60	Morton	63	Russell	73
Ellsworth	95	Ness	69	Scott	72
Gray	71	Norton	89 (1)	Sherman	74
Greenwood	89 (1)	Ottawa	74	Smith	64
Kearney	59	Pawnee	89	Stafford	76
Lincoln	55	Phillips	80	Stevens	84
Mitchell	89	Republic	81	Wabaunsee	80
Meade	52	Rooks	90		

26 Counties
2 National Merit Semifinalists

1920 Students
Ratio= .104

101-150 Students

Anderson	104
Atchison	143
Brown	132
Clay	106
Cloud	117
Coffey	145
Doniphan	116
Grant	109
Harper	101
Kingman	116
Linn	108
Marion	139
Nemaha	132
Pratt	116
Rice	149 (1)
Thomas	106
Washington	115
Wilson	140

18 Counties
One National Merit Semifinalist

2194 Students
Ratio= .045

151-200 Students

Allen	167
Bourbon	184
Jackson	160 (1)
Marshall	173 (1)
Neosho	200

5 Counties
2 National Merit Semifinalists

884 Students
Ratio= .262

201-250 Students

Osage	218
Pottawatomie	235
Seward	237 (1)

3 Counties
1 National Merit Semifinalist

690 Students
Ratio=.144

251-300 Students

Cherokee	269
Dickinson	297 (2)
Ellis	276
Franklin	296 (1)
Jefferson	254
McPherson	289 (3)
Miami	277 (2)

7 Counties 1958 Students
8 National Merit Semifinalists Ratio= .408

301-350 Students

Barton	326
Ford	308 (3)
Labette	301 (2)
Sumner	322

4 Counties 1257 Students
5 National Merit Semifinalists Ratio= .397

351-400 Students

Crawford	373
Geary	373
Harvey	380 (3)
Lyon	358 (2)
Montgomery	397

5 Counties 1881 Students
5 National Merit Semifinalists Ratio= .265

401-450 Students

Cowley	442
Finney	423 (2)

2 Counties 865 Students
2 National Merit Semifinalists Ratio= .231

501-550 Students

Riley	531 (10)

1 County 531 Students
10 National Merit Semifinalists Ratio = 1.883

551-600 Students

Salina	572 (1)

1 County 572 Students
1 National Merit Semifinalist Ratio= .174

651-700 Students

Leavenworth	700 (4)
Reno	693 (3)

2 Counties 1393 Students
7 National Merit Semifinalists Ratio = .502

701-750 Students

Butler	725 (2)
Douglas	735 (12)

2 Counties 1460 Students
14 National Merit Semifinalists Ratio = .958

Other 1640-4195 Students

Shawnee	1720 (9)	Ratio= .523
Wyandotte	1641 (5)	Ratio= .304
Johnson	3862 (40)	Ratio= 1.035
Sedgwick	4195 (23)	Ratio= .548

Other Total = 11418 Students
4 Counties
75 National Merit Semifinalists
Ratio= .656

Twenty-nine (29) counties out of 105 supplied National Merit Semifinalists.

Source of Eleventh Grade Enrollments: Headcount Enrollment Kansas Public Schools 1991-92. Kansas State Board of Education. January 1992, Topeka.

COUNTY DATA DESCRIBING PER CAPITA INCOME AND EDUCATIONAL LEVEL

	County	Per Capita Income	Total Persons 25 years & over	No./% of High School Graduates or Higher	No./% of Bachelors Degree or Higher
	Allen	13,616	9,445	7,008/74.2	1,171/12.4
	Anderson	13,900	5,196	3,648/70.2	421/8.1
	Atchison	13,378	10,442	8,093/77.5	1,388/13.3
	Barber	16,560	3,996	3,178/79.4	515/12.9
	Barton	16,038	19,121	14,914/78.0	2,600/13.6
	Bourbon	14,611	9,847	7,277/73.9	1,379/14.0
	Brown	14,140	7,347	5,760/78.4	918/12.5
*(2)	Butler	16,192	32,125	26,021/81.0	5,461/17.0
	Chase	16,244	2,084	1,623/77.9	283/13.6
	Chautaqua	12,672	3,162	2,292/70.5	335/10.6
	Cherokee	12,163	13,847	9,721/70.2	1,426/10.3
	Cheyenne	16,449	2,307	1,712/74.2	307/13.3
	Clark	18,818	1,717	1,434/83.5	300/17.5
	Clay	14,561	6,309	4,908/77.8	839/13.3
	Cloud	14,081	7,494	5,695/76.0	1,034/13.8
	Coffey	14,798	5,589	4,298/76.9	754/13.5
	Comanche	15,580	1,626	1,268/78.0	242/14.9
(2)	Cowley	14,993	23,837	18,330/76.9	3,551/14.9
	Crawford	14,372	22,641	16,913/74.7	4,234/18.7
	Decatur	21,502	2,822	2,215/78.5	384/13.6
(2)	Dickinson	14,154	12,731	10,146/79.7	1,514/11.9
	Doniphan	11,677	5,167	3,772/73.0	501/9.7
(12)	Douglas	13,886	42,308	37,569/88.8	16,246/38.4
	Edwards	17,831	2,649	2,021/76.3	347/13.1
	Elk	14,696	2,421	1,629/67.3	254/10.5
	Ellis	14,863	15,396	12,409/80.6	3,603/23.4
	Ellsworth	14,764	4,568	3,499/76.6	585/12.8
(2)	Finney	15,056	18,051	12,798/70.9	2,599/14.4
(3)	Ford	16,982	16,197	12,406/76.6	2,932/18.1
(1)	Franklin	13,820	13,922	10,734/77.1	1,796/12.9
	Geary	12,164	16,214	13,514/83.4	2,367/14.6
(1)	Gove	17,915	2,215	1,752/79.1	301/13.6
	Graham	14,912	2,456	1,903/77.5	349/14.2
	Grant	19,564	4,116	3,091/75.1	560/13.6
	Gray	14,863	3,266	2,267/69.4	412/12.6
(1)	Greeley	23,620	1,128	929/82.4	190/16.8
(1)	Greenwood	14,858	5,490	4,123/75.1	571/10.4
	Hamilton	21,727	1,639	1,203/73.4	211/12.9
	Harper	16,855	4,964	3,882/78.2	541/10.9
(3)	Harvey	14,870	19,969	16,215/81.2	4,054/20.3
	Haskell	18,274	2,318	1,764/76.1	311/13.4
	Hodgeman	14,070	1,475	1,252/84.9	255/17.3
(1)	Jackson	13,631	7,389	5,970/80.8	768/10.4
	Jefferson	13,515	10,399	8,423/81.0	1,404/13.5

	County	Per Capita Income	Total Persons 25 years & over	No./% of High School Graduates or Higher	No./% of Bachelors Degree or Higher
	Jewell	13,647	3,055	2,468/80.8	357/11.7
(40)	Johnson	23,346	230,732	214,350/92.9	93,446/40.5
	Kearney	17,031	2,397	1,769/73.8	300/12.5
	Kingman	13,297	5,545	4,297/77.5	660/11.9
	Kiowa	17,744	2,481	1,935/78.0	362/14.6
(2)	Labette	14,182	15,347	11,387/74.2	1,857/12.1
	Lane	16,954	1,604	1,300/81.1	286/17.8
(4)	Leavenworth	12,674	42,005	35,494/84.5	10,039/23.9
	Lincoln	14,191	2,637	2,046/77.6	306/11.6
	Linn	13,383	5,594	4,134/73.9	582/10.4
	Logan	16,357	2,089	1,637/78.3	332/15.9
(2)	Lyon	14,769	19,815	16,228/81.9	4,240/21.4
(3)	McPherson	14,649	17,413	13,617/78.2	3,030/17.4
	Marion	14,430	8,808	6,500/73.8	1,312/14.9
(1)	Marshall	14,849	8,001	6,200/77.5	816/10.2
	Meade	15,653	2,840	1,816/79.5	486/17.1
(2)	Miami	14,064	15,144	11,888/78.5	1,999/13.2
	Mitchell	14,010	4,804	3,968/82.6	759/15.8
	Montgomery	13,642	25,490	18,607/73.0	3,467/13.6
	Morris	12,663	4,258	3,440/80.8	532/12.5
	Morton	15,928	2,148	1,628/75.8	348/16.2
	Nemaha	14,771	6,777	5,130/75.7	834/12.3
	Neosho	14,152	11,258	8,691/77.2	1,295/11.5
	Ness	18,579	2,808	2,190/78.0	345/12.3
(1)	Norton	14,488	4,216	3,242/76.9	540/12.8
	Osage	13,387	10,137	7,795/76.9	943/9.3
(1)	Osborne	14,603	3,468	2,639/76.1	381/11.0
	Ottawa	12,033	3,887	3,148/81.0	544/14.0
	Pawnee	17,007	5,116	4,206/82.1	854/16.7
	Phillips	15,153	4,610	3,406/73.9	502/10.9
	Pottawatomie	13,773	10,068	8,236/81.8	1,571/15.6
	Pratt	16,191	6,472	5,333/82.4	1,262/19.5
(2)	Rawlins	14,937	2,333	1,876/80.4	336/14.4
(3)	Reno	14,289	41,151	31,851/77.4	6,131/14.9
	Republic	15,022	4,776	3,740/78.3	492/10.3
(1)	Rice	14,363	6,988	5,675/81.2	1,307/18.7
(10)	Riley	13,583	30,565	28,028/91.7	10,484/34.3
	Rooks	14,057	4,084	3,026/74.1	449/11.0
	Rush	16,135	2,793	2,027/72.6	321/11.5
	Russell	17,062	5,650	4,209/74.5	797/14.1
(1)	Saline	17,017	31,778	28,185/82.4	5,625/17.7
	Scott	17,091	3,408	2,629/77.2	470/13.8
(23)	Sedgwick	17,727	252,868	20,8636/82.4	56,137/22.2
(1)	Seward	15,752	10,810	7,805/72.2	1259/11.6
(9)	Shawnee	17,886	104,795	88,422/84.4	23,369/22.3
	Sheridan	14,781	2,030	1,654/81.5	270/13.3
	Sherman	16,648	4,442	3,331/75.0	555/12.5
	Smith	14,916	3,769	2,789/74.0	277/10.0
	Stafford	17,724	3,640	2,865/78.7	601/16.5
	Stanton	20,267	1,406	1,081/76.9	238/16.9
	Stevens	23,417	3,155	2,473/78.4	445/14.1
	Sumner	15,594	16,820	12,968/77.1	1,901/11.3
	Thomas	16,891	4,988	4,259/85.4	783/15.7

	County	Per Capita Income	Total Persons 25 years & over	No./% of High School Graduates or Higher	No./% of Bachelors Degree or Higher
	Trego	14,981	2,564	1,869/72.9	310/12.1
	Wabaunsee	13,460	4,359	3,652/83.8	549/12.6
	Wallace	15,648	1,147	892/77.8	143/12.5
	Washington	12,912	4,939	3,437/69.9	553/11.2
	Wichita	19,646	1,723	1,235/71.7	215/12.5
	Wilson	13,273	7,087	5,287/74.6	808/11.4
	Woodson	14,273	2,912	2,056/70.6	245/8.4
(5)	Wyandotte	12,752	100,533	70,272/69.9	10,355/10.3
	Kansas	16,526	1,565,936	1,273,106/81.3	330,412/21.1

Source: For Per Capita Income, Institute for Public Policy and Business Research, Kansas Statistical Abstract 1990-91. The University of Kansas.

For other Data. Bureau of the Census, 1990 Census of Population and Housing. Summary of Social, Economic and Housing Characteristics Kansas.

Expenditures Per Student in School Districts Enrolling National Merit Semifinalists

Unified School District	High School(s)	Number of National Merit Semifinalists	Expenditure Per Student
200 Greeley County	Greeley County High School	1	4,770.38
202 Turner-Kansas City	Turner High School	1	3,524.27
213 West Solomon Valley	Lenora High School	1	7,847.61
229 Blue Valley	Blue Valley High School	2	4,709.72
	Blue Valley North High School	3	
230 Spring Hill	Spring Hill High School	1	4,028.56
233 Olathe	Olathe North High School	1	4,149.08
	Olathe South High School	3	
253 Emporia	Emporia High School	2	3,158.49
259 Wichita	Wichita High School East	7	3,686.75
	Wichita High School Heights	2	
	Wichita High School North	1	
	Wichita High School Northwest	4	
	Wichita High School Southeast	7	
	Wichita High School West	1	
266 Maize	Maize High School	1	3,962.63
290 Ottawa	Ottawa High School	1	3,164.04
292 Wheatland	Wheatland High School	1	6,667.58
305 Salina	Salina High School Central	1	3,219.38
308 Hutchinson	Hutchinson High School	3	3,382.63
318 Atwood	Atwood High School	2	4,893.47
335 North Jackson	Holton High School	1	5,158.66
364 Marysville	Marysville High School	1	4,107.42
373 Newton	Newton High School	1	3,303.74
375 Circle	Circle High School	1	4,149.79
376 Sterling	Sterling High School	1	5,089.93
378 Riley County	Riley County High School	1	4,183.15
383 Manhattan	Manhattan High School	8	3,189.49

384 Blue Valley	Blue Valley High School	1	4,673.33
385 Andover	Andover High School	1	3,641.95
390 Hamilton	Hamilton High School	1	6,412.90
392 Osborne County	Osborne High School	1	5,023.67
416 Louisburg	Louisburg High School	2	4,268.77
418 McPherson	McPherson High School	3	3,370.62
437 Auburn-Washburn	Washburn Rural High School	1	3,464.55
440 Halstead	Halstead High School	1	4,855.41
443 Dodge City	Dodge City High School	3	3,203.32
450 Shawnee Heights	Shawnee Heights High School	2	3,220.48
453 Leavenworth	Leavenworth High School	3	3,235.13
457 Garden City	Garden City High School	2	3,271.06
460 Hesston	Hesston High School	1	4,680.89
464 Tonganoxie	Tonganoxie High School	1	4,115.98
465 Winfield	Winfield High School	2	3,289.54
473 Chapman	Chapman High School	2	3,949.69
480 Liberal	Liberal High School	1	3,268.33
497 Lawrence	Lawrence High School	12	3,653.23
500 Kansas City	Sumner Academy of Arts and Sciences	4	3,712.37
501 Topeka	Highland Park High School	1	3,616.76
	Topeka High School	3	
	Topeka West High School	2	
503 Parsons	Parsons High School	1	3,439.88
504 Oswego	Oswego High School	1	5,049.77
512 Shawnee Mission	Shawnee Mission East High School	14	4,079.91
	Shawnee Mission North High School	5	
	Shawnee Mission Northwest High School	5	
	Shawnee Mission South High School	4	
	Shawnee Mission West High School	2	

Source of Expenditures Per Student: League of Kansas Municipalities, Kansas Government Journal, January 1991.

Instructional Costs Per Classroom in School Districts Enrolling National Merit Semifinalists

Unified School District	High School(s)	Number of National Merit Semi-Finalists	Instructional Costs Per Classroom
200 Greeley County	Greeley County High School	1	$30,295
202 Turner-Kansas City	Turner High School	1	$36,158
213 West Solomon Valley	Lenora High School	1	$27,531
229 Blue Valley	Blue Valley High School	2	$43,846
	Blue Valley North High School	3	
230 Spring Hill	Spring Hill High School	1	$37,224
233 Olathe	Olathe North High School	1	$37,629
	Olathe South High School	3	
253 Emporia	Emporia High School	2	$40,199
259 Wichita	Wichita High School East	7	$42,431
	Wichita High School Heights	2	
	Wichita High School North	1	
	Wichita High School Northwest	4	
	Wichita High School Southeast	7	
	Wichita HIgh School West	1	
266 Maize	Maize High School	1	$41,783
290 Ottawa	Ottawa High School	1	$31,979
292 Wheatland	Wheatland High School	1	$33,846
305 Salina	Salina High School Central	1	$36,130
308 Hutchinson	Hutchinson High School	3	$33,491
318 Atwood	Atwood High School	2	$35,133
335 North Jackson	Holton High School	1	$33,623
364 Marysville	Marysville High School	1	$39,462
373 Newton	Newton High School	1	$34,641
375 Circle	Circle High School	1	$41,829
376 Sterling	Sterling High School	1	$33,472

378 Riley County	Riley County High School	1	$34,841
383 Manhattan	Manhattan High School	8	$39,945
384 Blue Valley	Blue Valley High School	1	$31,014
385 Andover	Andover High School	1	$37,466
390 Hamilton	Hamilton High School	1	$28,760
392 Osborne County	Osborne High School	1	$32,297
416 Louisburg	Louisburg High School	2	$38,948
418 McPherson	McPherson High School	3	$34,827
437 Auburn-Washburn	Washburn Rural High School	1	$31,550
440 Halstead	Halstead High School	1	$34,769
443 Dodge City	Dodge City High School	3	$35,145
450 Shawnee Heights	Shawnee Heights High School	2	$33,841
453 Leavenworth	Leavenworth High School	3	$35,753
457 Garden City	Garden City High School	2	$32,716
460 Hesston	Hesston High School	1	$38,578
464 Tonganoxie	Tonganoxie High School	1	$39,599
465 Winfield	Winfield High School	2	$33,315
473 Chapman	Chapman High School	2	$35,438
480 Liberal	Liberal High School	1	$40,402
497 Lawrence	Lawrence High School	12	$35,508
500 Kansas City	Sumner Academy of Arts & Sciences	4	$35,197
501 Topeka	Highland Park High School	1	$35,269
	Topeka High School	3	
	Topeka West High School	2	
503 Parsons	Parsons High School	1	$33,140
504 Oswego	Oswego High School	1	$38,418
512 Shawnee Mission	Shawnee Mission East High School	14	$40,844
	Shawnee Mission North High School	5	
	Shawnee Mission Northwest High	5	
	Shawnee Mission South High School	4	
	Shawnee Mission West High School	2	

Sources of Instructional Costs per Classroom: Division of Fiscal Services and Quality Control, Kansas State Board of Education, September, 1992.

NATIONAL MERIT SEMIFINALISTS' INTENDED CAREER CHOICES
KANSAS

	Female	Male	Total
Agriculture, Natural Resources Management		1	1
Writer, Editor	1		1
Nuclear engineer		2	2
Engineer	7	11	18
Acrospace, Aeronautical engineer	1	5	6
Chemical engineer		4	4
Civil, Construction, Transportation Engineer		1	1
Electrical engineer		4	4
Mechanical engineer		1	1
Astronomer	1		1
Biologist	1	1	2
Chemist		1	1
Mathematician, Statistician	1	1	2
Physicist	1	5	6
Biochemist	3	3	6
Advertiser		1	1
Physician	4	13	17
Physical therapist		1	1
Veterinarian	1		1
Education		1	1
Elementary school teacher	1		1
Secondary school teacher	2		2
College teacher		2	2
Linguist, interpreter	1		1
Psychologist	1		1
Lawyer	4	3	7
Government service, politician	1		1
Sociologist	1	1	2
Graphic, commercial design artist		1	1
Musician (except teacher)		1	1
Computer systems analyst, programmer	1	5	6
Business and commerce		2	2
Economist		1	1
Architect	1	3	4
Journalist	1	1	2
Actor, director	1		1
Military		2	2
Music teacher		2	2
Banker, Broker, Financier		1	1
Health and Medical profession	2	1	3
Scientist	3	3	6
Undecided	15	19	34
Fine and Applied Arts		1	1
Social scientist and Related profession	2		2
Social worker	1		1
Other	1	1	2
Unreported		3	3
	60	109	169

Source: National Merit Scholarship Corporation. Semifinalists in the 1993 Merit Scholarship Competition.

Wichita Eagle-Beacon Data from the Series on the Brain Drain
A Study of Kansas Merit Finalists from 1970 through 1980

As Reported by the Wichita Eagle-Beacon, February 10, 1986

Migration Patterns by Career

Percentage of semifinalists within the following occupations who have left Kansas:	Left
Teaching/college	75%
Journalism/writing	75%
Science	73%
Engineering	71%
Business	71%
Computer Science	67%
Medicine	65%
Law	61%
Homemaking	53%
Accounting	53%

Who have stayed in Kansas:	Stayed
Agriculture	100%
Blue-collar jobs	77%
Self-owned business	68%
Teaching/grades 1-12	63%

February 9, 1986

Most popular cities among those who have left:	Number of People
San Francisco	43
Washington	39
Kansas City	36
Dallas - Ft. Worth	33
New York	31
Boston	31
Chicago	22
Houston	20
St. Louis	18
Austin	17
Denver	16
Seattle	15
Minneapolis/St. Paul	14

Most popular cities among those who have stayed:	Number of People
Wichita	109
Lawrence	105
Kansas City	79
Johnson County	44
Manhattan	37
Topeka	28
Newton	17
Salina	13

KANSAS LEGISLATIVE RESEARCH DEPARTMENT
DATA FROM THE STUDY OF THE BRAIN DRAIN

BASED ON A SURVEY OF 159 1986 KANSAS SEMIFINALISTS
101 OF WHOM RESPONDED

Kansas Schools Selected

Institution	Number of Students Attending
Kansas, University of	18
Kansas State University	17
Bethel College	2
Coffeyville Community College	1
Fort Hays State	1
Hesston College	1
McPherson College	1
Wichita State University	1
TOTAL:	42

Out-of-State Schools Selected

Institution	Number of Student Attending
Houston, University of	6
Stanford University	5
Northwestern University	3
Yale University	3
Amherst College	2
Carleton College	2
Harvard University	2
Massachusetts Institute of Tec.	2
Notre Dame, University of	2
Rice University	2
Texas, University of	2
Arkansas, University of	1
Brown University	1
California-Berkeley, University of	1
Carnegie-Mellon University	1
Case Western Reserve University	1
Chicago, University of	1
Colorado School of Mines	1
Colorado State University	1
Cornell University	1
Dallas, University of	1
Dartmouth College	1
Depaul University	1
Duke University	1
Georgetown University	1
Grace College of the Bible	1
Greenville College	1
Grinnell College	1
Illinois, University of	1
Massachusetts, University of	1
Princeton University	1

Santa Clara University	1
Swarthmore College	1
Trinity University	1
Tulane University	1
Tulsa, University of	1
United State Military Academy	1
Wellesley College	1
Williams College	1
TOTAL:	59

Second Choice Institution of Students Staying in Kansas

Institution	Number of Students Selecting
Kansas, University of	7
Kansas State University	4
Wichita State University	3
Grinnell College	2
Iowa State University	2
Massachusetts Institute of Tec.	2
Missouri, University of	2
Arizona State University	1
Beloit College	1
Bethel College	1
California-San Diego, University of	1
Carnegie-Mellon	1
Colorado State University	1
Colorado, University of	1
Cornell University	1
Denver, University of	1
Emporia State University	1
Johns Hopkins University	1
Minnesota, University of	1
Northwestern University	1
Reed College	1
Rose-Hulman Institute of Tech.	1
Texas Christian	1
UCLA	1
United States Naval Academy	1
Washington University	1
TOTAL:	41

Second Choice Institution of Students Leaving Kansas

Institution	Number of Students Selecting
Kansas, University of	8
Princeton University	5
Harvard University	4
Brown University	3
Stanford University	3
Washington University	3
Columbia University	2
Johns Hopkins University	2
Kansas State University	2
Massachusetts Institute of Tec.	2

Trinity University	2
Wichita State University	2
Yale University	2
Amherst College	1
Bethel College	1
Boston University	1
Cal Tech	1
California-Berkeley, University of	1
Calvary Bible College	1
Carleton College	1
Chicago, University of	1
Drew University	1
Duke University	1
Grinnell College	1
Harvey Mudd College	1
Missouri-Rolla, University of	1
Northwestern University	1
Pomona College	1
Southern Methodist University	1
United States Air Force Academy	1
Wellesley College	1
Wheaton College	1
TOTAL:	59

Reason for Choosing a School

Selection Criteria	Number of Students Identifying
Quality of academic program	77
Financial concerns	47
Prestige of institution	38
Best program in chosen field of study	37
Offered the best financial aids package	32
School seemed most interested in me	29
To get away from home	29
Friends go there	17
To be near family	15
To be near job	2
Other (unspecified)	17

Survey of Kansas High School Seniors Who Are National Merit Semifinalists

1. Male_____ Female _____

2. Date of Birth _____

3. Caucasian-American _____ African-American _____ Hispanic -American _____
   Asian-American _____ Native American _____ Other (please specify) _____

4. High School:
   a. Size: 1A ____ 2A____ 3A____ 4A ____ 5A ____ 6A ____
   b. Public _____ Private/Parochial _____

5. Are your biological parents both still living?
   a. Yes _____ No _____
   b. If "Yes" are they:
      Still married to each other_____ Separated _____ Divorced _____

6. Father's Occupation _____

7. Mother's Occupation _____

8. Indicate the highest level of education your parents have completed:

	Mother	Father
a. If less than a high school diploma, indicate grade level	_____	_____
b. High School graduate	_____	_____
c. If less than a college degree, indicate number of years in college	_____	_____
d. Associate (2 years) degree	_____	_____
e. Bachelor's (4 years) degree	_____	_____
f. Master's degree or higher	_____	_____
g. Other (please describe) _____	_____	_____

9. Do you have brothers and/or sisters?
   Yes _____ No _____
   If "Yes," how many brothers? _____ How many sisters? _____
   If "Yes," where are you in the birth order? _____

10. Please estimate your family's income for 1992-1993:
    under $10,000 _____ $10,000-$19,999 _____
    $20,000-$29,999 _____ $30,000-$39,999 _____
    $40,000-$49,999 _____ $50,000 and over _____

11. Extra-curricular activities in high school. Check all of those in which you participated.

    School paper _____ Yearbook _____ Student Government _____
    Forensics _____ Theater/Plays _____ Student Club(s) _____
    Debate _____ Band _____ Orchestra _____
    Choral Group _____ Honor Society(ies) _____ Service Organization _____
    Sports: (Mark "I" for Intramural and "V" for Varsity)
    Basketball _____ Football _____ Baseball _____
    Soccer _____ Volleyball _____ Track _____
    Tennis _____ Golf _____ Cross Country _____
    Swimming _____ Gymnastics _____ Wrestling _____
    Other (please list) _____

12. Extra-curricular activities in the community. Check all of those in which you participated during your high school years.

    4-H _____
    Boy or Girl Scouts _____
    Youth groups associated with a religious organization _____
    Candy Stripers _____
    Community based sports program _____
    Other (please list) _____

13. Leadership positions in high school (for example, editor, team captain, student government president, etc.)

    _____

14. Does your high school offer accelerated or advanced placement courses?

    Yes _____ No _____

    If "Yes," how many? _____

    If "Yes," list those you will have taken by the time you graduate.

    _____

    _____

15. Does your high school provide opportunities to take college courses taught by college or university instructors?

    Yes _____ No _____

    If "Yes," how many? _____

    If "Yes," list those you will have taken by the time you graduate.

    _____

    _____

16. Will you have earned some college credits by the time you graduate from high school?

    Yes _____ No _____

    If "Yes," how many semester hours? _____

17. Did you work for pay during the school year?

    Yes _____ No _____

    If "Yes," how many hours per week during your junior year? ___ During this year? ____

    If "Yes," briefly describe the nature of your work.

    _____

    _____

18. Did you work for pay during this past summer?

    Yes _____ No _____

    If "Yes," briefly describe the nature of your work.

    _____

    _____

19. Current cumulative high school grade point average (GPA) _____

20. Have you traveled beyond the United States?

    Yes _____ No _____

    If "Yes," to what country(ies) have you traveled?

    _____

21. Are you fluent in a language other than English?

    Yes _____ No _____

    If "yes," which one(s) _____

22. Have you studied a foreign language while in high schol?
Yes _____ No _____
If "Yes," which one(s)? _____
If "Yes," for how many years?_____

23. Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. Suppose the public schools themselves, in your community, were graded in the same way. What grade would you give the public schools you have attended?
A _____ B_____ C _____ D _____ Fail _____

24. Using the A, B, C, D, Fail scale again, what grade would you give the public school teachers you have had?
A _____ B_____ C _____ D _____ Fail _____

25. As you reflect on your school experiences, how would you judge the academic rigor of your program?
a. Elementary:
Should be more rigorous _____ Acceptable as it is _____
Should be less rigorous _____
b. Junior High/Middle School:
Should be more rigorous _____ Acceptable as it is _____
Should be less rigorous _____
c. High School:
1 English/Humanities:
Should be more rigorous _____ Acceptable as it is _____
Should be less rigorous _____
2. Mathematics:
Should be more rigorous _____ Acceptable as it is _____
Should be less rigorous _____
3. Science:
Should be more rigorous _____ Acceptable as it is _____
Should be less rigorous _____
4. Social Studies
Should be more rigorous _____ Acceptable as it is _____
Should be less rigorous _____

26. Estimate the quality of the following facilities and equipment available for student use at your high school.

	Excellent	Good	Fair	Poor	Not Available
Library	_____	_____	_____	_____	_____
Science Laboratory (ies)	_____	_____	_____	_____	_____
Classrooms	_____	_____	_____	_____	_____
Band/Orchestra Room	_____	_____	_____	_____	_____
Choral Room	_____	_____	_____	_____	_____
Auditorium/Theater	_____	_____	_____	_____	_____
Vocational Laboratories/Classrooms	_____	_____	_____	_____	_____
Computers	_____	_____	_____	_____	_____
Gymnasium/Basketball	_____	_____	_____	_____	_____
Swimming Pool	_____	_____	_____	_____	_____
Football Field	_____	_____	_____	_____	_____
Baseball Diamond	_____	_____	_____	_____	_____
Soccer Field	_____	_____	_____	_____	_____
Track	_____	_____	_____	_____	_____
Tennis Courts	_____	_____	_____	_____	_____

27. In some nations, students attend school as many as 240 days a year as compared to about 180 days in the United States. How do you feel about extending the public school year by 30 days, making the school year about 210 days or 10 months?

Favor _____ Oppose _____ Uncertain _____

28. What do you think are the biggest problems with which the public schools in your community must deal?

_____

_____

29. If you were allowed to make only one recommendation for improving the schools, what would that recommendation be?

_____

_____

30. Please list in order of preference three universities you would like to attend:

1st choice _____
2nd choice _____
3rd choice _____

31. What reasons underlie your first choice? (Why do you want to go there?) Check all applicable items.

Guidance Counselors' advice _____ Graduates go to top graduate schools _____
Teachers' advice _____ Graduates get good jobs _____
Relatives' wishes _____ Low tuition _____
Friends' suggestions _____ Promise of financial aid or scholarship ____
Religious affiliation _____ Good academic reputation _____ Near home _____
Reputation in sports _____ Size _____
Other (please list) _____
_____

32. What factor(s) will determine which university you will actually attend?

_____

_____

33. Have you made a choice of a career?

Yes _____ No _____

If "Yes," what is that choice? _____

Indicate the level of certainty of your choice by circling the appropriate number on the following scale, a "1" indicating that you are very certain and a "5" that you are very uncertain.

1 2 3 4 5

34. When you have your college degree(s), if career opportunities are similar in several states, in which state would you most prefer to work?

_____

35. Have you been a participant in one of the Kansas Regents Honor Academies?

Yes _____ No _____

Thank you for completing this questionnaire.

Jones Institute for Educational Excellence, Emporia State University, Emporia, KS 66801-5087

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